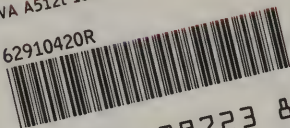


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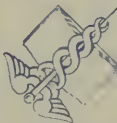
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"PHILADELPHIA MANETO."

"To every natural evil the Author of Nature has kindly provided an antidote. Pestilential fevers furnish no exception to this remark. The means of preventing them are as much under the power of human reason and industry as preventing the evils of lightning and common fire. I am so satisfied of the truth of this opinion that I look for a time when our courts of law shall punish cities and villages for permitting any of the sources of bilious and malignant fevers to exist with their jurisdiction."

DR. BENJAMIN RUSH.

William Henry Ford, M. D.

Died October 18, 1897.

With the issue of this Souvenir of the twenty-fifth year of the existence of the American Public Health Association we are called upon to pause in our labors by the dread summons of the King of Terrors, in the death of Dr. WILLIAM HENRY FORD, one of the most eminent members of this Association. The last act of his professional work was the preparation of a sketch of the sanitary records of Philadelphia, which is herewith published. Dr. Ford was born in this city, on the 7th of October, 1839, and graduated from Princeton University in 1860, and from the Jefferson Medical College in 1863. He served as an Acting Medical Cadet in the United States Army, and subsequently was detailed as Medical Officer on the steamer Whilddin, in the Pamunky River. In the summer of 1863 he was commissioned Assistant Surgeon of the Forty-fourth Regiment, Pennsylvania Volunteers, and afterwards became its Surgeon. Leaving the service after the battle of Gettysburg, he was elected Resident Physician to the Philadelphia Hospital, where he served two years. In 1865 he visited Europe, where he spent almost three years studying in the hospitals of Bonn, Berlin, Heidelberg, Vienna, Paris and London. On returning to his native city, in 1868, he began the practice of medicine, and soon connected himself with many learned societies, including the Pathological Society of Philadelphia, College of Physicians, Philadelphia Obstetric Society and the American Public Health Association. He was an active and enthusiastic member of the Board of Health from the time of his appointment, in 1871, until his death, and served as its President eleven years. His labors in promoting the efficiency of the Municipal Hospital for Contagious Diseases are best appreciated by those who are most familiar with his work, but all who have received the benefits of that institution will hold his memory in grateful remembrance.

This brief tribute cannot be more fittingly closed than by quoting the remarks of his Honor, the Mayor, at a meeting of citizens for the purpose of making arrangements for the holding of the Convention of the American Public Health Association in this city, convened at the Mayor's Office October 19, 1897. His Honor remarked :

"I cannot let the occasion pass—indeed, I feel I would be neglecting my duty if I allowed this meeting to adjourn without saying a word or two relative to the loss we have sustained in the death of Dr. FORD. A more honest, conscientious and devoted public servant I never knew. His life was fully and devoted to humanity. He spent the best years of his life in the public service, laboring for you, for me and the community. His reputation, too, was not confined to this city, for wherever the public health was a consideration, there his worth was known and his work respected."

"As an executive I cannot speak too highly of him, nor can the city bestow too much praise on such a man. We would all do wrong did we not stop and drop a tear in memory of one of the truest and most devoted men to humanity it has ever been my pleasure to meet. Not till he has been taken from us do we realize the extent of his good works. Some of his most devoted friends will not know his worth until the whole story of his life is written."

...AMERICAN...

PUBLIC HEALTH ASSOCIATION



The United States of America

The Dominion of Canada

The Republic of Mexico

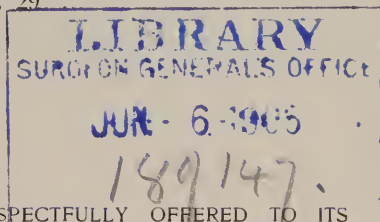
1897

Twenty-Fifth Annual Meeting

PHILADELPHIA, PA.

Tuesday, Wednesday, Thursday and Friday,

OCTOBER 26, 27, 28, 29



A MEMENTO OF THE SILVER ANNIVERSARY RESPECTFULLY OFFERED TO ITS
GUESTS BY THE COMMITTEE OF ARRANGEMENTS

WA
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1897



Municipal Buildings, of the City of Philadelphia.

HISTORICAL SKETCH

OF THE

AMERICAN PUBLIC HEALTH ASSOCIATION.

The American Public Health Association will convene in the City of Philadelphia, Pa., Tuesday, October 26, at 10 o'clock A. M., and continue in session four days.

The sessions of the Association will be held at Hotel Walton.

The Executive Committee have selected the following for consideration:

- I. The Pollution of Water-Supplies.
- II. The Disposal of Garbage and Refuse.
- III. Animal Diseases and Animal Food.
- IV. The Nomenclature of Diseases and Forms of Statistics.
- V. Car Sanitation.
- VI. Steamship and Steamboat Sanitation.
- VII. International Committee on the Prevention of the Spread of Yellow Fever.
- VIII. On the Relation of Forestry to Public Health.
- IX. On the Cause and Prevention of Infectious Diseases.
- X. On Public Health Legislation.
- XI. On the Cause and Prevention of Infant Mortality.
- XII. On Transportation of Diseased Tissues by Mail.
- XIII. The Period During which Each Contagious Disease is Transmissible and the Length of Time for which each Patient is Dangerous to the Community.
- XIV. Sanitation, with Special Reference to Drainage, Plumbing and Ventilation of Public and Private Buildings.
- XV. Consider and Report upon some Method of International Arrangement for Protection Against the Transmission of Infectious Diseases.
- XVI. Disinfectants.
- XVII. To Examine into the Existing Sanitary Municipal Organizations of the Countries Belonging to the Association, with a View to Report upon those most Successful in Practical Results.

Upon all the above subjects special committees have been appointed. Papers will be received upon other sanitary and hygienic subjects also.

AMERICAN PUBLIC HEALTH ASSOCIATION.

1897.

PRELIMINARY ANNOUNCEMENT.

The American Public Health Association was organized in 1872 by a few public-spirited men, impressed with the need of bringing together in one body the ablest sanitarians in the country, for the purpose of inaugurating measures for the restriction and prevention of contagious and infectious diseases, and for the diffusion of sanitary knowledge among the people.

By previous arrangement these gentlemen met at the New York Hotel, in the City of New York, on Friday evening, April 18, 1872, for the purpose of "creating a permanent association for promoting public-health interests." The group consisted of Drs. Stephen Smith, Elisha Harris, E. H. Janes, Heber Smith, Moreau Morris, and Carl Pfeiffer, Esq., of New York City; Dr. Francis Bacon, of New Haven, Conn.; Dr. Christopher C. Cox, of Washington, D. C.; and Dr. John H. Rauch, of Chicago, Ill. At this meeting it was voted to form a permanent organization, and several additional members were elected.

The second meeting was held at the Ocean Hotel, Long Branch, N. J., September 12, 1872. The records show that twelve persons were present. A proposed plan of organization was presented, which was revised and adopted as the "Constitution of the American Public Health Association." At this session seventy persons, nearly all of whom were physicians interested in sanitary work, were elected to membership. A long list of committees on various sanitary topics was appointed, and after the organization was perfected in detail the meeting adjourned.

The next meeting (which was announced as the annual meeting) was held at Cincinnati, Ohio, May 1-3, 1873. The records show that seventeen persons were present. The session was an active one, several papers were read and resolutions relating to public-health topics adopted.

The next annual meeting was held in New York City on November 11-14, 1873.

The following is a list of the dates and places of the meetings of the Association to the present time.

| | | |
|----------------------|---------------------|------------------------|
| Preliminary meeting, | New York, N. Y., | April 18, 1872. |
| " " " | Long Branch, N. J., | September 12, 1872. |
| " Annual meeting," | Cincinnati, Ohio. | May 1-3, 1873. |
| 1st Annual meeting, | New York, N. Y., | November 11-14, 1873. |
| 2d " " | Philadelphia, Pa., | November 10-13, 1874. |
| 3d " " | Baltimore, Md., | November 9-12, 1875. |
| 4th " " | Boston, Mass., | October 3-6, 1876. |
| 5th " " | Chicago, Ill., | September 25-27, 1877. |
| 6th " " | Richmond, Va., | November 10-22, 1878. |
| 7th " " | Nashville, Tenn., | November 18-21, 1879. |
| 8th " " | New Orleans, La., | December 7-10, 1880. |

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| 9th Annual meeting, | Savannah, Ga., | November 29—December 2, 1881. |
| 10th " " | Indianapolis, Ind., | October 17-20, 1882. |
| 11th " " | Detroit, Mich., | November 13-15, 1883. |
| 12th " " | St. Louis, Mo., | October 14-17, 1884. |
| 13th " " | Washington, D. C., | December 8-11, 1885. |
| 14th " " | Toronto, Canada, | October 5-8, 1886. |
| 15th " " | Memphis, Tenn., | November 8-11, 1887. |
| 16th " " | Milwaukee, Wis., | November 20-23, 1888. |
| 17th " " | Brooklyn, N. Y., | October 22-25, 1889. |
| 18th " " | Charleston, S. C., | December 16-19, 1890. |
| 19th " " | Kansas City, Mo., | October 20-23, 1891. |
| 20th " " | Mexico, Mex., | November 29—December 2, 1892. |
| 21st " " | Chicago, Ill., | October 9-14, 1893. |
| 22d " " | Montreal, Canada, | September 25-28, 1894. |
| 23d " " | Denver, Colo., | October 1-4, 1895. |
| 24th " " | Buffalo, N. Y., | September 15-18, 1896. |
| 25th " " | Philadelphia, Pa., | October 26-29, 1897. |

In a few years the Association had become so strong and influential that a proposition was made at the St. Louis meeting, in 1884, to include Canada within the territorial area of the Association, and a change in the constitution to accomplish this was proposed, which change was adopted at the Washington meeting in 1885, giving representation to the Dominion of Canada and the several Provinces in the Association.

Subsequently, it was proposed to interest the Republic of Mexico in the work of the Association, and to that end, in 1890, the Secretary officially invited the government of Mexico and the National Board of Health of that country to send delegates to the Charleston meeting. This invitation was accepted, and two delegates from Mexico were present.

The next year, at the Kansas City meeting (1891), a proposition to amend the constitution so as to admit Mexico and the several Mexican states was presented, which change was made at the meeting in the City of Mexico in 1892.

It will be seen from the foregoing brief history that the Association has grown in twenty-five years from a little parlor organization to the largest public health association in the world, embracing in territorial area three great countries, nearly the entire North America.

The Association has issued twenty large and valuable volumes, embracing the reports, papers, and discussions of its annual meetings. In addition, it has published in a separate volume the work of one of its committees on "Disinfection and Disinfectants," which embraces a large amount of original research, and which at once assumed a standard place in the literature of the subject. Further, it has published the Lomb Prize Essays, over 100,000 copies of which have been distributed in this country. Many of its papers and reports have been widely circulated in pamphlet form.

Commencing with the year 1895 the Association has published its transactions in the form of a quarterly journal, which may be bound annually, like the preceding volumes.

These publications constitute in themselves a library upon sanitation; they are elegantly printed and bound, and are alone worth more to any person interested in hygiene than the cost of membership. Each member is entitled to the annual volume, delivered free of expense.

Among its members may be found physicians, lawyers, ministers, civil and sanitary engineers, health officers, teachers, plumbers, merchants, and,

in fact, every profession, as well as many of the industries, are represented in its list of members. The only qualifications required for membership are a good, moral character, an interest in hygiene, and the endorsement of two members of the Association. The membership fee is five dollars a year. There is no initiation fee.

The record of the Association from its beginning to the present time has been one of continual progress, and its influence in sanitary legislation and public health work generally cannot be over-estimated.

It is now twenty-four years since this important body met in Philadelphia. The records fail to show how many members were present on that occasion, but, as at no previous meeting had the constitutional quorum of twenty-five been obtained, it is probable that not many more than that number were in attendance. Literally, "the little one has become a thousand." But if small in numbers the meeting was large in labors and results. The session continued four days, and forty papers were presented and discussed. Among the Philadelphians participating may be noted the late Professor Henry Hartshorne, who read a paper on "Excessive Infant Mortality and the Means of its Prevention"; Dr. William Pepper, on "The Sanitary Relations of Hospitals"; Dr. J. L. LeConte, on the "Organization of Municipal Boards of Health"; Pros. S. D. Gross, "Upon the Factors of Disease after Injuries, Parturition and Surgical Operations," and Drs. S. Weir Mitchell, William Hunt and H. Ernest Goodman; all names which occupy an honorable position in the medical and sanitary annals of this city and country.

This was the initiation of a movement which culminated in the establishment of a State Board of Health in this as in many other of the States of the Union. Most of the great advances that have been made within the last twenty-five years in sanitary science and preventive medicine in this country have occurred under the fostering care of this great international organization.

Philadelphia, in common with other municipalities, owes a debt of gratitude to the American Public Health Association for the grand work it has accomplished by its incessant labors in behalf of the advancement of sanitary science and the protection of public health, and is honored in being selected as the city in which its silver jubilee shall be celebrated.



Independence Hall, Chestnut Street, below Sixth.

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| Dr. SAMUEL R. OLIPHANT..... | New Orleans, La. |
| Mr. ALFRED V. WOOD..... | Brunswick, Ga. |
| Surgeon JOSEPH Y. PORTER, U. S. A..... | Key West, Fla. |

ON THE TRANSPORTATION AND DISPOSAL OF THE DEAD.

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| Dr. ELZEAR PELLETIER..... | Montreal, P. Q. |
| Dr. J. D. GRIFFITH..... | Kansas City, Mo. |
| Dr. PETER H. BRYCE..... | Toronto, Ont. |
| Dr. DAVID CERNA..... | Galveston, Texas. |

ON THE RELATION OF FORESTRY TO PUBLIC HEALTH.

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| Dr. SALVADOR GARCADIAGO..... | Guadalajara, Mex. |
| Dr. JOHN COVENTRY..... | Windsor, Ont. |
| Dr. JAMES B. EAGLESON..... | Seattle, Wash. |
| Dr. WILLIAM H. BREWER..... | New Haven, Conn. |

ON NOMENCLATURE OF DISEASES AND FORMS OF STATISTICS.

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| Dr. SAMUEL W. ABBOTT..... | Wakefield, ass. |
| Dr. JESUS E. MONJARAS..... | San Luis Potosi, Mex. |
| Dr. ELZEAR PELLETIER..... | Montreal, P. Q. |
| Dr. CRESSY L. WILBUR..... | Lansing, Mich. |
| Dr. A. G. YOUNG..... | Augusta, Me. |

ON THE CAUSE AND PREVENTION OF INFECTIOUS DISEASES.

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| Dr. J. J. KINYOUN, U. S. H. M. S..... | Washington, D. C. |
| Dr. C. N. HEWITT..... | Red Wing, Minn. |
| Surgeon-General GEORGE M. STERNBERG, U. S. A..... | Washington, D. C. |
| Dr. JESUS E. MONJARAS..... | San Luis Potosi, Mex. |
| Dr. PETER H. BRYCE..... | Toronto, Ont. |
| Dr. A. WALTER SUITER..... | Herkimer, N. Y. |
| Dr. WYATT JOHNSON..... | Montreal, P. Q. |

ON PUBLIC HEALTH LEGISLATION.

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| Dr. J. N. McCORMACK..... | Bowling Green, Ky. |
| Dr. JAMES D. PLUNKET..... | Nashville, Tenn. |
| Dr. HENRY B. BAKER..... | Lansing, Mich. |
| Dr. SAMUEL R. OLIPHANT..... | New Orleans, La. |
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| Dr. U. O. B. WINGATE..... | Milwaukee, Wis. |
| Dr. C. O. PROBST..... | Columbus, O. |
| Dr. E. P. LACHAPELLE..... | Montreal, P. Q. |
| Dr. GREGORIO MENDIZABAL..... | Orizaba, Mex. |
| Dr. JAMES PATTERSON..... | Winnipeg, Manitoba. |
| Dr. HENRY D. HOLTON..... | Brattleboro, Vt. |
| Dr. DANIEL LEWIS..... | 249 Madison Ave., New York City. |

ON THE CAUSE AND PREVENTION OF INFANT MORTALITY.

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| Dr. CHARLES N. HEWITT..... | Red Wing, Minn. |
| (With authority to select associates.) | |

ON TRANSPORTATION OF DISEASED TISSUES BY MAIL.

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| Dr. E. P. LACHAPELLE..... | Montreal, P. Q. |
| Dr. HENRY MITCHELL..... | Asbury Park, N. J. |
| Dr. DOMINGO ORVANANOS..... | Mexico, Mex. |

ON RIVER CONSERVANCY BOARDS OF SUPERVISION.

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| Dr. C. O. PROBST..... | Columbus, Ohio. |
| RUDOLPH HERING, C. E..... | 277 Pearl St., New York City. |
| ALLEN HAZEN, C. E..... | 85 Water St., Boston, Mass. |
| Dr. JOSE RAMIREZ..... | Mexico, Mex. |

ON THE PERIOD DURING WHICH EACH CONTAGIOUS DISEASE IS TRANSMISSIBLE AND THE LENGTH OF TIME FOR WHICH EACH PATIENT IS DANGEROUS TO THE COMMUNITY.

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| Prof. EDUARDO LICEAGA..... | Mexico, Mex. |
| Dr. JOHN L. LEAL..... | Paterson, N. J. |
| Surgeon FERNANDO LOPEZ, Mexican Army..... | Mexico, Mex. |
| Medical Director NEWTON L. BATES, U. S. N..... | Washington, D. C. |
| Surgeon J. J. KINYOUN, U. S. M. H. S..... | Washington, D. C. |

ON SANITATION, WITH SPECIAL REFERENCE TO DRAINAGE, PLUMBING AND VENTILATION OF PUBLIC AND PRIVATE BUILDINGS.

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| Dr. MIGUEL MARQUEZ..... | Chihuahua, Mex. |
| Mr. CROSBY GRAY..... | Pittsburg, Pa. |
| Dr. JOHN L. LEAL..... | Paterson, N. J. |
| Dr. FRANKLIN W. WRIGHT..... | New Haven, Conn. |

TO CONSIDER AND REPORT UPON SOME METHOD OF INTERNATIONAL ARRANGEMENT FOR PROTECTION AGAINST THE TRANSMISSION OF INFECTIOUS DISEASES.

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| Dr. STEPHEN SMITH..... | 640 Madison Ave., New York City. |
| Dr. FREDERICK MONTIZAMBERT..... | Quebec, P. Q. |
| Dr. EDUARDO LICEAGA..... | Mexico, Mex. |
| Dr. FELIX FORMENTO..... | New Orleans, La. |
| Deputy Surgeon-General CHARLES SMART, U. S. A..... | Washington, D. C. |

ON DISINFECTANTS.

Prof. FRANKLIN C. ROBINSON, M. D.....Brunswick, Me.

(With authority to select four associates.)

TO EXAMINE INTO THE EXISTING SANITARY MUNICIPAL ORGANIZATIONS OF THE COUNTRIES BELONGING TO THE ASSOCIATION, WITH A VIEW TO REPORT UPON THOSE MOST SUCCESSFUL IN PRACTICAL RESULTS.

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 Dr. WYATT JOHNSON.....Montreal, P. Q.
 Dr. DOMINGO ORVANANOS.....Mexico, Mex.
 Dr. WILLIAM FRANCIS BRUNNER.....Savannah, Ga.
 Surgeon P H. BAILHACHE, U. S. M. H. S.....Washington, D. C.

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Seal of William Penn.

THE STORY OF SANITATION IN PHILADELPHIA.

Wm. H. Ford, M. D., President of the Board of Health. *

Pennsylvania's first colonists under the Proprietor set sail from England August, 1681, in three ships and finally landed at Chester. Penn, himself, did not sail from England until August, 1682, arriving at New Castle, October 27, 1682, where he was welcomed by the Swedes and Dutch. He soon moved on to Chester, then called Upland.

The town and borough of Philadelphia was located the latter part of 1682. The place was soon surveyed and a primitive government organized.

Penn's voyage in the "Welcome" was a good one, as mariners would say, but a calamity overtook the ship in the form of small-pox, which proved fatal to nearly one-third of the original one hundred passengers. At least two or three of the twenty-three ships that arrived, before the close of the year had this disease on board.

The Swedes, who held possession long before Penn arrived, seemed to be a contented people, manifesting little of the progressive spirit and energy that characterized the English colonists. Penn's genius caused a city and commerce to spring into instant existence. Penn says of the site: "I remember not one better seated, so that it seems to me to have been appointed for a town." The climate was remarkably healthful, provisions plentiful. Wild fowl and fish abundant, and venison liberally supplied by the Indians. There was no scarcity of fruits of the woods.

* Died October 18, 1897.

The colonists were a sturdy, healthy people, temperate in their mode of life and actuated by good impulses. The work of their hands prospered. Emigration immediately became very active. Barring small-pox, the first outbreak of calamitous disease occurred about seventeen years after the landing of Penn. Yellow fever, which had been raging in the West Indies, was imported to Philadelphia about 1699, causing great devastation.

Penn's visit was a short one, he having been called back to England in 1684 to defend his title to Pennsylvania limits. It was not until 1699 that he returned to the Province, which had, in his absence, been governed by deputies. Although intending to remain for life, he sailed again for England in 1701, never to return. During his brief stay he governed with great satisfaction. Over one hundred laws were passed, a great Indian treaty was sealed, and the town of Philadelphia was chartered as a city October 28, 1701. Edward Shippen was the first Mayor under the new charter of Pennsylvania, although mention is made of a charter obtained in 1691, with Humphrey Murrey as Mayor.

There are records of but few sanitary regulations in those early days. It is known that at the commencement of the Eighteenth Century notice was made of provisions for a public slaughter-house, for draining hollows, for regulating the keeping of cows, for grubbing and cleaning land between Broad street and on the River Delaware for the purpose of sowing grass. In 1748, on account of the danger of malarial disease, the swamp land on Dock creek, near Spruce street, was filled in as a sanitary measure, advocated by Dr. Rush and others.

In the primitive city, pumps were rarely seen. Such wells as existed were generally in the streets for general use. In 1748 it is said there was a well to every house, and the water was good and clear. The yellow fever epidemic of 1793 brought about a change of opinion with regard to pump water which had always been regarded with favor, and led to the construction of water works.

The city water works were introduced in 1799, by building a power house on the Schuylkill River, south of Market street, and a marble edifice at Centre Square as a "receiving fountain." In 1818 steam pumping was installed at Fairmount. The Schuylkill water was always unquestionably of most excellent character and would be to-day were it not for constant artificial pollution.

An historical account of Philadelphia and the Provinces, by Gabriel Thomas, in 1697, speaks of "the fruitful country and flourishing city." "Of lawyers and physicians," he remarks, "I shall say nothing, because this country is very peaceable and healthy."

Watson, in his *Annals*, speaks of dyspepsia as a disease scarcely known among the primitive inhabitants, and of apoplexy as not the frequent disease it has now become. These, he esteems, as diseases of increased civilization, and produced by the enlarged cares in sustaining expensive living and display of pomp and show.

The City Hospital was at first united with the Poor House. In 1751 a separate hospital was located on Market street, west of Fifth street. It continued there four or five years. In 1755 the Pennsylvania Hospital, "for the

relief of the sick and miserable," was founded and located at its present site, having been organized under the direction of Dr. Thomas Bond in 1752. It was then considered quite far out of town. This was the first regularly organized hospital in the country, and it has ever since been celebrated for its roll of distinguished physicians and surgeons and its unrivalled public service. "At and before 1740 it was the practice when sick emigrants arrived to place them in empty houses about the city. Sometimes diseases were imported to the neighborhood, as once occurred, particularly, at Willing's alley. On such occasions physicians were provided for them at the public expense."

"The Governor was induced in 1741 to suggest the procuring of a pest house or hospital; and in 1742 a pest house was erected on Fisher's Island, called afterwards "Province Island," because purchased and owned by the Province for the use of sick persons arriving from sea." This was, in reality, the first quarantine station ever organized on the Delaware.

Yellow fever was the great scourge that afflicted Philadelphia in its early history. Extensive commercial relations with the West Indies opened a channel for the introduction of the pestilence. Small-pox occasionally prevailed among the early settlers, a disease by no means a novelty to them, as it was introduced by them at the very beginning of the settlement. Malarial fevers were prevalent, in some years proving very malignant. In fact, it has been only within the last two or three decades that these fevers have been rare in Philadelphia. Typhus fever was occasionally imported from Europe.

In 1687 it is said "a great mortality occurred at the Falls of Delaware, occasioned by 'the great land flood and rupture.'" In 1699 yellow fever was imported from the West Indies and proved very fatal, two hundred and twenty of the population dying of this disease, which occurred in the Autumn of that year. The summer of 1717 was remarkable for the "great prevalence of fever and ague in the country parts adjacent to Philadelphia." In 1741 and then again in 1743 yellow fever prevailed.

In 1747 the city was visited by what was called the "Bilious Plague preceded by influenza." "Epidemic pleurisy" was very fatal in the Spring of 1748. In 1754 and 1755 there were many deaths from "Malignant Fever," which was called the "Dutch Distemper," supposed to have been communicated by servants imported from Germany and Holland. It is spoken of as "Jail Fever," and was probably true Typhus. Small-pox, which was introduced at the beginning of the settlement, has ever since prevailed periodically. Before the discovery of vaccination great hope was placed in inoculation as a protection against the disease. It was first practiced in Philadelphia in 1731. It had been practiced in New England much earlier, as far back as 1721. Although small-pox was prevalent on Penn's ship in 1682, the first mention of the prevalence of the disease in Philadelphia was in 1701. In the year 1726 a vessel infected with small-pox arrived at Philadelphia, and the passengers were taken to the Swedes Church, below town, and conducted through the woods to the Blue House Tavern, at South street. All recovered without communicating the disease to the inhabitants of the city. Again in 1730 there was "great mortality from small-pox." Inoculation was practiced until March 29, 1824 when a law was enacted making it a misdemeanor, except by special permission of the Board of Health. Thomas Jefferson was

successfully inoculated in 1760. This practice was succeeded by vaccination, which was introduced into the country by Waterhouse in 1801.

The mortuary records of small-pox in Philadelphia are very complete from 1807 to the present date. Since 1807, in only fourteen years has the city been entirely free from this disease. The years of the greatest mortality were 1808, 1811, 1823, 1824, 1834, 1841, 1852, 1861, 1871, 1872, and 1881. The death rate from this disease was greatest in 1871 and 1872, the years of the great pandemic. Since 1881 the deaths have been very few; in six years none at all.

During the Revolutionary war empty private houses were made use of for soldiers suffering from camp fever. The house at the southeast corner of Sixth and Market street is mentioned as being used for this purpose, it having been deserted by its Tory owner. The year 1793 was one of the most eventful in the history of Philadelphia on account of the scourge of yellow fever which created desolation and gloom throughout the entire city. General Washington was at that time living in Germantown, and thither the officers and many of the inhabitants fled to escape the disease, which only slightly prevailed there, and only among persons who had contracted it in the city. The experience of that year caused preparations to be made for future emergencies by the engagement of houses and grounds for the purpose of refuge. This disease again appeared in 1798 in Philadelphia, and also in Chester, where it depopulated whole families and streets.

It is difficult to get accurate information of the population of the city from its start, but some few records are obtained which are interesting. In 1744 the population was estimated at 13,000 and the number of houses 1,500. In 1777 there were 21,767 inhabitants. The war must have diminished the population materially. In 1790 there were 42,516 inhabitants. In 1800, 67,811; in 1810, 88,987 inhabitants and 20,260 houses. In 1722 the "Gazette" first began to publish monthly statements of deaths and burials. In 1830 there were 227 interments. According to the U. S. census, the population of Philadelphia from 1810 to the present time, by decades, is as follows:

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| 1820 | 137,097 |
| 1830 | 188,797 |
| 1840 | 268,034 |
| 1850 | 408,762 |
| 1860 | 564,529 |
| 1870 | 674,022 |
| 1880 | 846,980 |
| 1890 | 1,046,964 |

In 1788 the first steamboat was invented by John Fitch and placed upon the Delaware.

The early history of quarantine of the city of Philadelphia possesses much interest. As early as 1700—4—8, "An Act to prevent sickly vessels coming into this government," was passed by the Colonial Assembly, William Penn, Proprietor and Governor. This act prohibited every unhealthy or sickly vessel from an unhealthy or sickly place from coming nearer than one mile to any of the towns or ports of the Province or territories without clean bills of health.

This Act continued in force until January 22, 1744

In the Journal of the Provincial Council, March 22, 1720, is an account of the appointment of a Health Officer under the Act of 1700. It does not appear that any other special action was taken to prevent the importation of contagious or infectious diseases until about 1742, when a quarantine station was located at Fisher's Island, subsequently called Province Island. The first health officer was appointed by the Governor, Sir Wm. Keith. It may be remarked that the precaution was taken to protect the station from inroads upon it by purchasing the whole island and renting the farms for agricultural purposes, while reserving six acres for the special use of the Hospital, thus reserving control of the surrounding territory. The establishment of this quarantine seems to have been all that was necessary prior to the Revolutionary war.

In 1749 the trustees of Province Island were directed to build a hospital or pest house for the reception of strangers imported into the Province. In 1762 cases of yellow fever appeared with serious mortality. Dr. La Roche estimates the loss of life at 1,000 persons from this cause. During the period of the Revolutionary war commerce had so dwindled away that there was very little necessity for a quarantine station. The hospital, however, was used for the care of sick persons who should be sent from army boats, so that the station was really turned into a military hospital for a time.

After the close of the war commerce revived. But little attention was given to quarantine laws until the invasion of yellow fever in 1793.

The lamentable experience of 1793 was the occasion of the adoption of general health laws. The hospital upon State Island, formerly Province Island, was ordered to be repaired for the admission of patients, and a resident physician appointed. Vessels coming up the river were ordered to anchor for a visit. By this Act, a Board of Health was established in the city. It consisted of twenty-four inspectors appointed by the Mayor and Corporation of the city and the six justices of Northern Liberties and Southwark. This Act was passed on the 22d of April, 1794, and the Board organized in the following May.

It is said that yellow fever prevailed in 1794, 1795, 1796, 1798, and in 1802, in which latter year there were 835 deaths. The epidemic of 1794 caused hardly over thirty deaths. In 1795 a proclamation was issued prohibiting persons from Norfolk or New York coming within a distance of fifteen miles of Philadelphia, and guards were stationed at the various ferries to enforce this order, which remained in operation until October 27th, when the Governor repealed it.

It seems that in 1798 the Academy of Medicine of Philadelphia discussed the subject of the existence of a malignant bilious fever in the city and made certain recommendations.

It appears from the records that there was dissatisfaction with the then existing quarantine station and the need of a better location and more effectual laws was apparent; and hence the Board of Health appointed a Committee to confer with the Collector of the Port for the purpose of determining upon a more suitable location for a lazaretto station. The Committee reported May 6, 1799, in favor of a station on Tinicum Island, near Darby Creek, in Delaware County, and the property was purchased. This was the inauguration of the station at the Lazaretto site, which continued under the

Board of Health until the year 1805, when the control of quarantine was removed from the Board of Health and vested in a State Quarantine Board. On May 17, 1799, regulations were formulated for the government of the station, defining the duties of the resident physician, of the quarantine master, and the steward, and also establishing rates, but the quarantine was not, at this time, transferred from State Island to the Lazaretto. The new station was finally occupied in 1801, and a proposition to sell the old station made. The Board of Health was abolished in 1797 and a new corporation created, entitled "The Managers of the Marine and City Hospital." The Board consisted of twelve persons and was invested with all the powers of the old Board of Health and with more extensive authority. In 1798 the new Board entered upon their duties. The presence of yellow fever was proclaimed by the Board of Health on the 17th of August, 1798. The population of the city at this time was said to be 55,000. It is estimated that 40,000 people fled from the city on account of the pestilence.

On August 9, 1798, the City Hospital was opened at the Wigwam, on the banks of the Schuylkill, at Race street, and four cases of yellow fever were admitted. The disease was very malignant. It is said that in private practice three out of four died, while in the City Hospital only two out of four died. The number of deaths due to this epidemic was 3,645, occurring mostly during the Summer. In 1793 the percentage of deaths was 22. In 1798 it is said to have been 24 of the population which remained in the city. The old Lazaretto property was sold to the United States Government and added to the Fort Mifflin property. The year 1803 began by the re-appointment of the entire Board of Health. The quarantine season of 1803 opened April 1st. A building was constructed in 1804 at the Lazaretto for the detention of seamen and passengers from infected vessels.

Nothing very special occurred in quarantine legislation until the year 1818, when a code of laws, including quarantine, was passed by the Legislature, many of which are in existence at the present day. By this act the Board of Health was reorganized by changing the system of appointment to that of election, each ward electing one member annually.

In January, 1831, the Board of Health memorialized Congress to appoint a commission to inquire into the nature of cholera and the prevention of its introduction into this country. In view of the existence of cholera the Board adopted stringent regulations with the object of the prevention of its introduction. Thorough cleanliness was insisted upon. A Committee of Sickness was organized and physicians appointed. Cholera hospitals were organized in different sections of the city. The first case of sporadic cholera was reported on July 9, 1832. By July 18th, five hospitals were in readiness for the sick, and others were in preparation. By the middle of September the epidemic of cholera had largely subsided.

Yellow fever and small pox occasionally prevailed, but not to any great extent up to the year 1847. This was a year of large immigration by sailing vessels from England and Ireland, and much typhus fever existed among the passengers. In the year 1848 Asiatic cholera appeared in the city. Cholera hospitals were established for the reception of patients. By July 4th, forty-seven cases a day and twenty deaths were reported. It is said that this disease came by way of New York City and not by the avenue of the

river. The same year vessels were detained at the Lazaretto Station on account of small-pox and typhus fever. The sick from typhus fever were removed to the Dutch House. Immigration this year was also considerable, and the Lazaretto was kept in active operation. Almost every arrival brought with it cases of this disease. The Board of Health was very active this year in making preparations for the epidemic of cholera, which did occur in the summer of that year.

As early as 1768 there were Street Commissioners appointed, for we observe in that year that a contract was awarded to remove "all such dirt as shall arise from and is incident to common housekeeping within the paved streets of the city."

Carpenter's Hall was constructed in 1770, and on September 5th, 1774, the First Continental Congress met there.

In 1793 when the yellow fever was so alarmingly prevalent nearly five thousand persons were victims of this disease. On October 11th, the height of the fever, 119 burials took place, which would represent in Philadelphia to-day over 2,500 burials. On October 31st a hospital was established on "Bush Hill," in the mansion vacated by Vice-President Adams. The experience of this year led to improvements in the sanitary system and quarantine, the appointment of a Health Board, a Lazaretto Physician, and a Health Officer.

In 1797, when yellow fever was again very prevalent, hundreds of tents were placed along the Schuylkill and proved of great advantage, inasmuch as the mortality was light. From August to October of that year there 3,573 deaths.

Philadelphia has not suffered excessively from outbreaks of yellow fever since 1805. In 1855 there was an outbreak of the disease on July 19th. Between that date and October there were 128 deaths. In 1870 the disease appeared at the Lazaretto in June, causing a number of deaths there and later several in the city, in all eighteen. Since that time, although the disease has been brought to the station, it has, in no case, been transmitted to the city. In all epidemics the fever has broken out and prevailed in some portion of a strip of the city fronting on the Delaware River, from Vine to Christian street, and hardly ever beyond Second street. The epidemic years especially noted were as follows: 1699, 1747, 1762, 1793, 1794, 1798, 1799, 1802, 1805, 1819, 1820, 1855, 1870.

With the painstaking enforcement of the best devised system of quarantine regulations, primarily, and the rigid observance of municipal cleanliness, this disease is no longer feared in our Northern cities, and under the maintenance of similar conditions will probably never devastate these places again.

The quarantine station at Lazaretto, on Little Tinicum Island, about 11 miles down the Delaware, is of historic interest. It was located there in 1799 and has been maintained continuously by the city under the supervision of the Board of Health, until 1895, a period of nearly one hundred years. In 1895 a State Quarantine Board was created, and soon after the station was removed to Marcus Hook, Pa., near the boundary between the State and Delaware. There are now practically three quarantine stations: One at Cape

Henlopen, one at Reedy Island, both maintained by the National Government, and the State station at Marcus Hook, all acting in harmony.

In recent years the quarantine station at Lazaretto has been greatly modernized and improved and well-equipped for its work. In anticipation of cholera in 1893 still further improvements were made, such as the erection of a large steam disinfecting oven and chambers for disinfection by chemical fumes. A floating quarantine detention vessel, capable of accommodating one thousand suspects, completely fitted up with every necessary appliance for disinfection, sterilizing water, bathing, steam disinfection of vessels, etc., was in constant use. This vessel, perhaps the most complete of its kind ever put into service, was kept in active operation during the entire season; in fact until late in the Fall of that year. Not a case of cholera reached the city in that or any succeeding years.

Since the year 1860, complete and accurate records have been kept of marriages, births, and deaths under the Registration Law. Since that year the statistics have been published annually. Previous to that year the deaths were published annually in a tabular form on one large sheet of paper, from the year 1808 to 1860, by the Health Officer by order of the Board of Health. With this statement there is also a monthly statement of deaths of adults and children, from 1837, inclusive. The weekly deaths were also tabulated in the annual statement, together with the births, so far as they could be obtained. Previous to the year 1807 accounts of births and burials, on printed sheets, have been preserved from 1787 under the title of "An Account of the Births and Burials in the Associated Churches of Christ Church and St. Peter's in Philadelphia," but the series is broken. Previous to 1787 similar accounts of births and burials in Christ Church Parish in Philadelphia, running up to 1774, have been preserved, with a number of intervening years left out. From 1774 to 1787, an eventful period in the history of Philadelphia, these records, if they were published, have not been kept. These valuable records have been preserved in the Health Office, having been collected years ago by an antiquarian and purchased by the city.

It is observed that in the early accounts of births and deaths for example, in the year 1740, the terms under which causes of death were reported are twenty-four, such, for example, as "Apoplex," "Dropsie," "Flux," "Imposthume in the Side," "Distempers." Consumption is mentioned in 1849. The list somewhat increases as the years pass on, and we have mention made of bilious fever, cholera, convulsions, dysentery, whooping-cough, influenza, measles, rheumatism, typhus fever, etc. In 1808 the Board of Health first published a statement of deaths, including the number for the months and the total for the year 1807. This statement is further enlarged and improved and is not very unlike, in nomenclature, the tabular statements made to-day. A weekly bulletin of deaths, variously classified, with meteorological tables, has been published since January, 1873.

After vaccination was introduced in 1801, by Waterhouse, inoculation still continued to be practiced, for we observe in this first official statement of the Board of Health that in 1807 there were 30 deaths from natural small-pox and two deaths from inoculated small-pox. The total number of deaths for the year was 2,045. The same is observed in the tables for several years. In 1811 there were 113 deaths from natural small-pox and 4 from inoculated

small-pox. Typhus fever, otherwise called putrid fever, seems to have been very prevalent in the early part of the century. In 1808 there were 35 deaths ascribed to this cause; in 1809, there were 62; in 1810, there were 12; in 1811, there were 43; in 1812, there were 36; in 1813, there were 102; in 1814, there were 94; in 1815, there were 84, etc. In 1824 there were 307 deaths from typhus fever and 10 deaths from nervous fever. Whether or not typhus fever included what we denominate as typhoid fever or typhus mitior, it is impossible to say.

In 1754 yellow fever caused 7 deaths. In 1750 small-pox caused 6 deaths; in 1756, 112 deaths; in 1757, 8 deaths; in 1759, 106 deaths; in 1763, 30 deaths, and yellow fever 16 deaths. In 1764 small-pox caused 6 deaths and yellow fever 1 death; in 1765, small-pox caused 57 deaths; in 1766, 20 deaths; in 1768, 4 deaths; in 1770, 8 deaths; in 1772, 9 deaths; in 1774, 11 deaths. In 1798 yellow fever caused 95 deaths. In 1756 the deaths from all causes were 1,058; in 1758, 806 deaths; in 1769, 1,160 deaths; in 1772, 1,070 deaths; in 1795, 2,274 deaths; in 1748, 4,080 deaths; in 1806, 1,672 deaths; in 1807, 1,250 deaths.

In 1832 there were 73 deaths from cholera morbus, 948 from cholera malignant, and 366 from cholera infantum. In the same year there were 681 deaths from consumption, 307 from scarlet fever, 196 from typhus fever, 39 from bilious fever, and 25 from nervous fever. Inflammation of the lungs caused 225 deaths, and influenza, 41 deaths. The total deaths in this year were 6,699. The succeeding year, 1833, the deaths fell to 4,440, cholera having entirely disappeared.

In 1837 the first mention is made of typhoid fever, in which year there were 28 deaths and also 71 deaths from typhus fever. In 1853 there were 26 deaths from yellow fever. In 1854 there were 12 deaths from yellow fever; 186 deaths from typhoid fever, 162 deaths from scarlet fever, 77 deaths from typhus fever. The total number of deaths in that year was 11,814. The greatest mortality was in July and August. In 1855 there were 4 deaths from yellow fever, and in the same year 163 deaths from scarlet fever, 231 from typhoid and 58 from typhus. The same year there were 275 deaths from small-pox. The total number of deaths in 1855 was 10,505.

In 1858 yellow fever caused 16 deaths, and in this year there were 9,741 deaths in all.

In the old mortuary records the term diphtheria does not appear, this disease having been recorded under various names, particularly as croup and sore throat. Since the new registration act was passed in 1860, diphtheria figures prominently as a cause of death. This is owing to a better knowledge of the disease, and particularly within the last five years, to the valuable aid to diagnosis afforded by bacteriological examinations, which all large cities and towns have provided at public expense.

Early in the decade, 1860—1870, spotted fever became prominently mentioned in the statistical records, and this disease was the subject of wide investigation. In 1863 and 1864 many deaths were attributed to this disease. In 1865 the term cerebro-spinal meningitis was substituted for spotted fever and has been used ever since. This disease has latterly not been very prevalent.

Typhus fever was present in epidemic form in 1863, 1864, and 1865, and

to a less extent in the next five years, although it has figured in the records to a moderate extent until 1887, when not a single death took place. Since this year typhus has only occasionally been a cause of death. Until comparatively recent years this disease, like scarlet fever, measles, diphtheria, yellow fever, was treated in general hospitals, particularly in the Philadelphia Hospital. Within the past ten years the Board of Health has exercised a rigid supervision over these diseases and treated the cases, demanding hospital care, in the Municipal Hospital for Contagious Diseases.

In 1866 cholera caused 910 deaths. The disease was brought into the port of New York among immigrants and thence to Philadelphia.

The first epidemic of relapsing fever occurred in 1870, following in the wake of typhus fever, with which disease it frequently co-exists in Russia. There were 162 deaths in 1870; 7 in 1871, and 1 in 1872, after which year the disease disappeared, and has not since returned. There were as many as 200 patients treated in the Municipal Hospital at one time. The mortality was not excessive.

Scarlet fever, measles, and whooping-cough are more or less prevalent annually, but in certain years these diseases have appeared in epidemic form. Provision is now made in the Municipal Hospital for scarlet fever and diphtheria, but whooping-cough and measles, except where they co-exist with the above-mentioned diseases, are not treated in the Hospital. There is a probability that in time these diseases, so contagious and fatal in early life, will receive the same care and restriction in hospital as the other contagious diseases of early life.

Years ago Philadelphia was noted for the cleanliness of its streets. Citizens insisted on this hygienic measure and assisted in its maintenance. With the growth of the city and the deterioration of cobble-stone paving, and difficulty of keeping so bad a surface clean, a gradual neglect of civic cleanliness crept in. The contract system became a disgrace to the city, and reform movements were instituted, but with little success. The Board of Health frequently condemned the condition of the streets as a contributing cause of disease, and demanded improved methods based upon improved paving of the streets. Finally in 1869, after successive failures to retrieve the good fame of the city, the Legislature placed street cleaning in the hands of the Board of Health, but under the contract system and also with the grave mistake of limiting contracts to one year. For more than ten years the Board of Health struggled with this work and wrought a great improvement, but the fact was apparent that the city could never be kept in clean condition so long as the cobble-stone pavement and brick gutters for surface drainage were retained. City Councils assumed the control of street cleaning under the agency of the Highway Department, but with no better results. Some improvement, however, was observed on streets newly paved with granite blocks.

In 1875 and 1876, in view of the Centennial Celebration, an impetus was given to the construction of improved pavements, and this good work has continued ever since. Finally, cobble-stone pavements were prohibited, and from that time an improved condition in the cleanliness of the streets has been observed. Upon the establishment of the Department of Public Works street cleaning and garbage removal (first established by the Board of Health in 1872,) was placed under a separate bureau, organized anew, and

excellent results have been obtained ever since. With new and improved pavements, mostly asphalt and granite blocks, the abandonment of surface drainage, and the systematic disposal of garbage by incineration and utilization, the city is maintained in a clean and satisfactory condition, which must necessarily have a beneficial influence on the public health.

The original sewers were constructed to receive storm water and surface drainage, and when in the course of time it was proposed to empty water-closets and cesspools into them, the Board of Health strongly protested, because of the possibility of conversion into elongated cesspools. It was contended that sewers should be specially constructed for this object, and that it was especially important to have adequate flushing. The Board of Health was right in view of the requirement of properly constructed sewers. But the water-carriage system is the only suitable system for large places, and it was better to utilize the old system with proper safe-guards and improve in the construction of new sewers, than to continue the old system of privies of the accumulative sort. To-day privies or cesspools are not permitted where a sewer is accessible, and cesspools must be constructed strictly according to rule. The consequence is that cesspools and deep wells are diminishing in number yearly, while the quantity of sewage is increasing. The immense volume of water in the Delaware makes the pollution apparently unappreciable, but the day may come when some plan of sewage clarification will be required, for which purpose there are ample facilities on the low lands below the built-up portions of the city.

Early in 1876 the old bucket-and-cart system for removal of excreta was abolished, and for it was substituted the odorless method by air-tight apparatus, pumps, and hose. The work is done in day-light instead of at night and is therefore under possible strict supervision. No satisfactory method of disposal of excreta has yet been devised, although laborious efforts have been made to secure such a reform.

The regulation of the slaughtering of cattle has been attempted with only partial success. The first advance in this line was the establishment of immense cattle yards and abattoir on the plateau west of the Schuylkill, between Market and Callowhill streets in 1896, which at the time was one of the most complete in the country. Later a meat inspection service was organized with excellent results.

Under the new city charter approved June 1, 1885, and effective April 1, 1887, important changes were made in the organization of the Board of Health. It provided that the members of the Board of Health "shall be five in number, to be nominated by the Mayor and confirmed by the Select Council for a period of three years." Before this change, the Board was constituted by the act of April 7, 1859, and consisted of twelve members, three of whom were elected by City Councils and the remaining nine appointed by the courts, the term of service being three years. The new charter does not change the authority and duties of the Board, but places the executive control in the hands of the Director of Public Safety subject to the orders and resolutions of the Board. For system sake, the Board of Health is *attached* to the Department of Public Safety.

The decade, 1887—1896, is probably the most important in the history of sanitary organization in Philadelphia. During this period the growth of the city has been rapid, and municipal improvement extensive and important.

During this time there has been rapid advancement in preventive medicine and in the perfection of measures of sanitary administration. Greater efforts have been made to steadily conserve the public health.

Less than twenty years ago the working force of the Board of Health consisted of a corps of unprofessional nuisance inspectors and one medical inspector, assisted by the Port Physician. To-day a large body of trained and expert officers are busily engaged in the performance of the varied duties connected with the whole field of sanitary inspection and investigation, so that for emergencies and for ordinary routine work the preparations are comprehensive, precise, methodical, up-to-date, and adequate, the results being satisfactory and the confidence of the community established and co-operation secured.

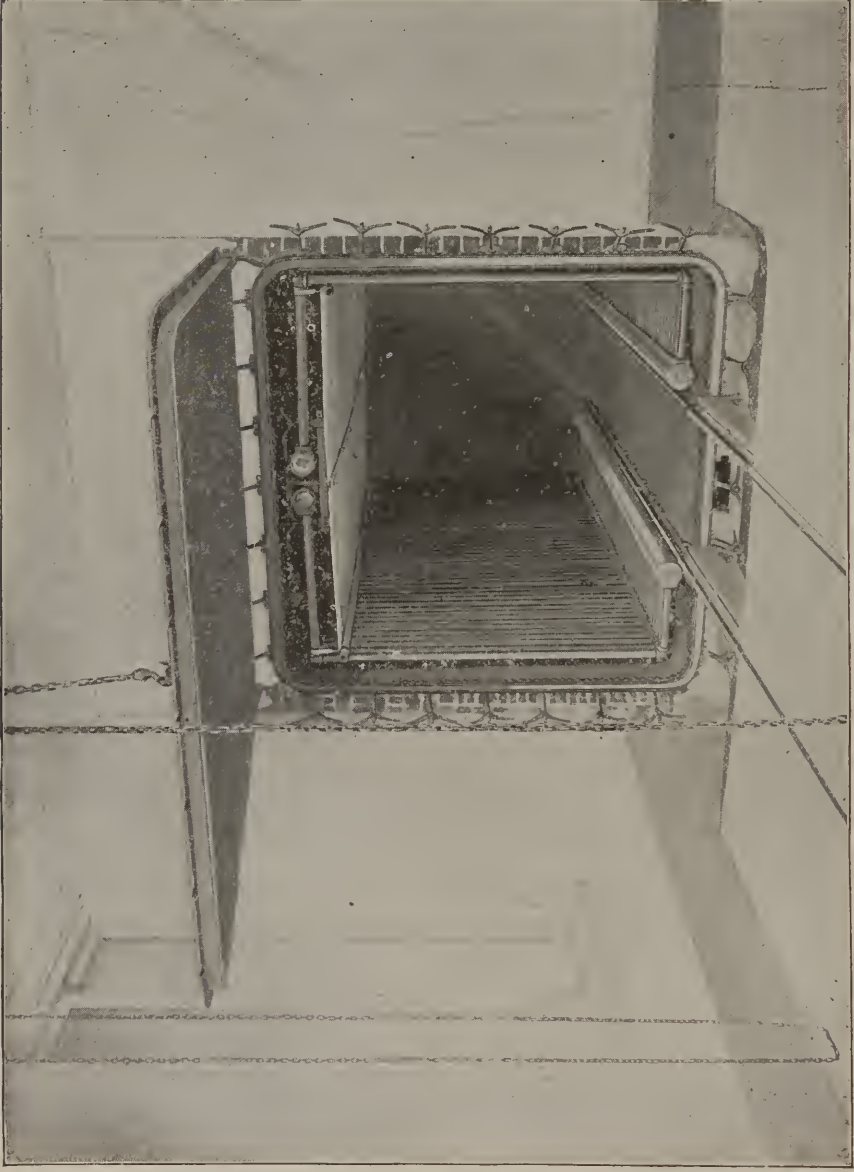
A system of house-to-house inspection established in 1888 on account of vessels arriving in port with yellow fever on board has since been continued with beneficial results. This work is performed in the spring, summer, and fall months, and results in abating nuisances which would otherwise be unobserved. The expenditure of half a million dollars in asphaltting and paving with smooth impervious surfaces small streets and alleys in the crowded sections of the city has returned markedly good results. This work has been continued, and has changed whole districts from the dirtiest to the cleanest sections of the city.

In 1888 an appropriation for a milk inspector was secured for 1889 under an obsolete law passed in 1878. A new law was proposed but defeated in the Legislature of 1888 and 1889. Subsequently Councils were induced to pass a milk ordinance, and later on the Legislature passed a law, the so-called "Pure Food Act," which gives ample authority for conducting this important service. There is now a complete inspection service and chemical and biological laboratories, where every necessary test can be made for use in enforcing the law.

A law regulating house-drainage and ventilation was passed in 1888, under which a most complete inspection service was organized. This division is self-sustaining. It is absolutely essential now that all house-drainage in Philadelphia shall be controlled and approved by the Board of Health, the penalty for violation of the law being severe and prohibitory. An important improvement, much needed, was the construction of the intercepting sewer along the east bank of the Schuylkill River above Fairmount dam, and extending to all sections of the city which naturally would drain into the city's water supply.

The public schools are subject to inspection, at first by one skilled medical officer, now by sixteen. A plan is on foot to extend the inspection to the school children, employing from fifty to one hundred physicians for the purpose. The advantages of such a service are at once apparent.

The last few days of 1889 witnessed the commencement of an epidemic of influenza, which subsequently became widespread and very destructive of life through its sequels and complications. The epidemic was remarkable from the fact that it swept over two continents almost simultaneously, affecting a very large proportion of the population, embarrassing trade and causing an amount of sickness and suffering that cannot be computed. It is also remarkable that in the face of so wide-spread and death-dealing a malady, recounted day by day with minuteness in the newspapers, the people



Disinfesting Chamber, Municipal Hospital.

maintained a *sang froid* which can only be explained by a misconception of the seriousness of the evil. Had cholera, or yellow fever, or small-pox as suddenly appeared a panic would have spread throughout the land. Since the above date this disease has frequently appeared, but in less fatal form. The microbic origin of the disease seems to have been established, although it is still difficult to explain the simultaneous appearance of the disease in widely separated countries. No special official restrictive measures have yet been attempted.

Public disinfection, established at first under the direction of a single officer, has since been organized on a large scale with a chief and a number of assistants. This division is able to do all public disinfection required, and essays to keep abreast of all the modern advances in disinfection. The latest advance is the use of formaldehyde gas generated at the time of use, although the sprayed formaline has been in use by the Board of Health since 1892, probably the earliest application of this disinfectant on a large scale in the United States. Bacteriological tests show the spray to be efficient, but probably less so than the fresh gas. The extensive steel disinfecting chamber constructed in 1892 answers every purpose for the city thus far for disinfecting by steam large articles, such as beds, mattresses, etc.

Many public baths have been established in the city and are frequented every season by great multitudes of people. Only a few of the smaller ones, and these private enterprises, are maintained all the year around.

Auxiliary organizations have done much to reduce infantile mortality by providing excursions and day's outings in the country and on the river. In this line of relief, the Sanitarium Association and the Children's Country Week have been faithfully working for years. In one season as many as 178,000 children and caretakers have been provided a day's excursion seven miles down the river. The Country Week's operations are more limited, but proportionally effective.

In 1860 public vaccination, heretofore performed indifferently, was transferred to the Board of Health. Since that year the average annual vaccinations have been 12,917, though in years of small-pox prevalence the operations have been far above this figure, as many as 30,000 in one year. The Act of Assembly of 1895, prohibiting the attendance upon school of all unvaccinated children, has had a very salutary effect, inasmuch as it has been rigidly observed. A child who has had small-pox is admitted without vaccination.

An illustration of the vagaries of opinion is seen in the declaration of the Board of Health in 1860 that the maintenance of a hospital for contagious and infectious diseases beyond what is provided at the Lazaretto is no longer essential, and as a result of this declaration notice was given of the intended vacation of the Hospital early in 1861.

A decided change in opinion, however, took place in the succeeding year when small-pox broke out, and measles, typhoid fever and other zymotic diseases appeared among the army recruits. The Board of Health, by request of Councils, promptly resolved to continue the existing hospital, and furthermore declared "that a permanent and commodious hospital for the care and treatment of contagious diseases was absolutely necessary and demanded in so large and populous a city as Philadelphia.

"The Managers of the Almshouse" rented the hospital at Bush Hill in

the latter part of 1823 for the reception of small-pox cases, so that it would appear that the Board of Health was not always in direction of hospitals for contagious diseases. It is said that up to the year 1743, there had not been an organized hospital in the city of Philadelphia. In 1826, small-pox broke out in the city, and a house located near where Ninth and South street intersect one another was used as an isolation house. It is said the victims of this epidemic in those days were taken to farm houses. In the year 1743 a movement was started by the merchants of the city to provide for the sick on account of the increase of small-pox brought by immigrants from Germany. The Colonial Assembly built a small hospital on State Island, at a later period called Fisher's Island, near the mouth of the Schuylkill River. This remained in use for sick immigrants until the year 1800, when the Lazaretto, on Little Tinicum Island, in Delaware County, was organized. The calamitous visitation in 1793 had so alarmed the inhabitants that it was then considered absolutely necessary to establish some measure to insure the public safety. The Guardians of the Poor had already refused to receive small-pox or fever patients into the Almshouse, then located on Spruce street, between Tenth and Eleventh streets. The Pennsylvania Hospital was closed at that time. The Guardians of the Poor took possession of the old circus at Sixth and Chestnut streets, but the residents of the neighborhood threatened to burn the place down unless the sick were removed. Application was then made to the Magistracy of the City, and finally a place was selected on Bush Hill.

The Board of Health was organized in 1794, and purchased Fish Tavern, on the west side of the bridge, subsequently occupied for years by the Pennsylvania Railroad Company. This was used for a time for hospital purposes. The first hospital established by the city was in 1796 or '97 at the foot of Race street on the Schuylkill River, and known as the "Wigwam" Hospital. At this time it was a somewhat celebrated tavern resorted to by gentlemen to eat their perch, the same as they in later times did at the Falls of Schuylkill, where catfish and coffee were so popular. This Hospital retained the name of the "Wigwam" Hospital for several years; the sign that used to swing there was removed to Germantown, where it became defaced by the ravages of time and use and was afterwards painted over. In 1805, the citizens in the vicinity of the "Wigwam" Hospital entered complaints against the institution. It was finally removed to a spot on the Wissahickon road near where Ridge avenue and Wallace street now intersect each other. Here it remained for two seasons only, when the citizens demanded its removal. For a time the city was again without a hospital. The people seemed to have the opinion that if another epidemic should visit the city, buildings should be located at some distant place to meet the emergency.

In the year 1810, a hospital for infectious diseases was erected on Bush Hill, where it remained until 1855, when it was removed. From that time until 1865 the city was without a hospital for infectious diseases. This was the subject of much regret. The Board of Health was obliged to open the Lazaretto Hospital, and patients had to be removed twelve miles from the city. No one can form any idea of the amount of suffering they were subjected to. In 1865 the Municipal Hospital for Contagious Diseases, at Twenty-second and Lehigh avenue, was completed and handed over to the Board of Health. The plot of ground contains over ten acres. Part of the

General View, Municipal Hospital and Pavilions.



plot is unavailable for use on account of location on the other side of the street. The buildings consisted of a main building containing a central administration building and two wings, the entire length of the structure being 280 feet and the width 50 feet.

There are now five separate buildings: A main building, one wing of which is used for scarlet fever, the other for occasional cases—it may be mixed cases or it may be typhus fever, etc. A building for leprosy, accommodating four cases; a group of four buildings, each pair connected by a corridor, for mixed cases or for small-pox; and two pavilions, separated by an administration building and dormitory for nurses, which are used for diphtheria patients.

There are no special private rooms for pay patients in any of the divisions of the hospital, except the diphtheria pavilion. The nearest approach to private accommodations is by screening off a portion of a large ward in which there are but few other patients. The diphtheria pavilion, which is a modern structure with every useful appointment, accommodates one hundred and ten patients. Besides the six wards there are thirteen comfortable, well-ventilated, well-lighted, well-furnished private rooms, each of which can accommodate a patient and a nurse. The disinfecting apparatus and ambulance service is ample and complete.

The Municipal Hospital for Contagious and Infectious Diseases is located about three miles from City Hall, but quite in the center of population. The site is pre-eminently well adapted for the work. But as would be supposed there is constantly an agitation of the question of its removal, not from public advantage or necessity, but rather for the benefit of property owners in its vicinity. Nevertheless, additions have been constantly made to the hospital buildings, and when finally public opinion has settled the question of retaining the present site, many needed improvements will be accomplished and the hospital made complete and efficient in all respects.

The threatened invasion of cholera in 1892 was a blessing in disguise. By its co-operation of the local legislative authority and favorable public sentiment was secured which resulted in the introduction of many sanitary measures of lasting benefit to the city. The Lazaretto was completely equipped and quarantine surveillance almost perfectly maintained. Every necessary appliance for the treatment of suspects, the sick, vessels and crew, besides the disinfection of cargo, and personal effects of passengers, was secured. The Quarantine Commission of the International Conference of State Boards of Health concluded their report with the statement "that to Philadelphia at least the Continent may confidently look for protection against the importation of cholera, so far as she can control its entry by way of the Delaware basin, and for limiting its spread within her own borders, should it unfortunately find its way into the city through other channels." The force of sanitary officers was largely increased and thereafter maintained. Nuisances in abeyance for years were removed because of availability of funds for the purpose. Domiciliary inspections over an extensive territory were rigidly performed. Stations for storing disinfectants and for telegraphic communication with health officials were established in all parts of the city. Inspection stations were established on various railroads entering the city, the ambulance corps enlarged, a new hospital pavilion con-

Main Building, Municipal Hospital.



structed, and in brief a condition of preparedness was secured which imparted confidence in the community.

On January 1, 1893, the Board prohibited the keeping of hogs in the City and County of Philadelphia, and also necessarily the feeding of garbage to swine, thus getting rid of two nuisances of great magnitude.

The Chemical Laboratory, fitted up in 1891, in City Hall, and supplied with all necessary apparatus and materials for making chemical analyses of water, milk and food supplies generally, has been of great service to the health administration.

The organization of a bacteriological laboratory early in 1895 was another advance in the application of exact methods of scientific investigation for the protection of the public health.

It was not until the International Congress was held at Buda-Pest, in 1894, that a very widespread public interest became manifested in the flattering prospects which the treatment of diphtheria by the so-called blood serum or antitoxin of diphtheria seemed to hold out. Very little experience in the use of this remedy had been gained in the United States. There was, however, sufficient to stimulate efforts to found a laboratory for cultivating and supplying the antitoxin, as well as for furnishing diagnostic tests and for cultivating the toxin of diphtheria. Since its establishment, the laboratory has been extended in its scope so that under the Chief of the Division of Pathology, Bacteriology, and Disinfectants, it includes the investigation of the etiology of certain communicable diseases, and their uses and the study and investigation of all subjects related to preventive and curative medicine, so far as they appropriately come within the scope of such an institution.

In 1894 the Board of Health required of farmers or producers of milk supplying the City of Philadelphia, a certificate or clean bill of health of their cattle based upon the tuberculin tests. Otherwise, the milk was liable to be rejected as being "suspicious." This action excited very free discussion, especially in Farmers' Institutes, resulting in the dissemination of exact information and useful knowledge, and, in fact, prepared the way for the introduction of legislation authorizing the establishment of a "State Live Stock Commission," chiefly concerned in the eradication of transmissible diseases among cattle, and among these tuberculosis.

The introduction of the electric passenger railways, commencing in 1893, and continuing into the two succeeding years, resulted in the substitution of smooth impervious pavements for the effete and unsanitary cobble stones. As a preliminary to repaving, improved sewers, drainage, and sidewalks were required. The effect of this marvelous change is apparent not only in the increased comfort of citizens, the cleanliness of the thoroughfares, but also in the improved condition of the health of the city. Philadelphia to-day has not only the best system of electric passenger railways in the country, but the best paved and best lighted streets as well.

Perhaps the most important sanitary legislation adopted in recent years is the Act of June 18, 1895, to provide for the more effectual protection of the public health in the several municipalities of the Commonwealth."



Old Lazaretto at Tinnicum.

It is aimed chiefly at the prevention of the spread of contagious and infectious diseases. It requires all cases of such diseases to be reported to the health authorities forthwith; authorizes the placarding of houses where such diseases exist; holds the head of the family responsible for the preservation of the placard where placed; provides for the proper burial of the dead from infectious diseases; prohibits public funerals in such cases; directs the isolation of infected persons; requires disinfection; regulates the attendance of children upon schools; prohibits unvaccinated children from attending school, and prohibits the use of infected articles until certified as disinfected. By supplementing the general health laws, this act has added greatly to the efficiency of sanitary administration.

The Division of Contagious Diseases, consisting of a Chief and fifteen assistant medical officers, is charged with the execution of this and the other laws for restricting or preventing the spread of contagious and infectious diseases. Whenever, in the opinion of the Medical Inspector or of his assistants, a person suffering from any of the diseases required to be reported to the Board of Health, cannot be properly cared for at home, full authority exists for having such person taken to the Municipal Hospital, even by the employment of force. Under a wise administration of this hospital, which in all its branches has accommodation for about 350 patients, there is very little opposition to removal to the hospital, and that generally with regard to cases which are the most suitable subjects for isolation. Quarantine guards are taken from 100 sub-policemen specially selected for the purpose and put under the control of the Medical Inspector.

An Act of July, 1895, placed public lodging houses and tenement houses conjointly, under several bureaus of the Department of Public Safety, including the Board of Health. Still another law of importance, passed in the same year, was the Act entitled "An Act for the prevention of blindness, imposing a duty on all midwives, nurses or other persons having care of infants, and upon health officers, and fixing a penalty for neglect thereof." A law giving authority to the Board of Health to license lying-in establishments and to have supervision over the same, was passed by the preceding Legislature.

The preparation of the antitoxin of diphtheria by the Board of Health in quantity more than could be used at the Municipal Hospital made it possible to supply this material to physicians for use in the treatment of the indigent sick. In addition to this aid to the poor, a special officer was appointed to inject antitoxin gratuitously and to practice intubation in cases of poverty. The bacteriological laboratory has also been serviceable in applying a rapid and satisfactory method for the diagnosis of typhoid fever which will compare not unfavorably in point of efficiency with the methods now employed for the diagnosis of tuberculosis and of diphtheria.

For several years past typhoid fever has gradually become less destructive of life. The death-rate per 100,000 of population in the seventeen years, 1880-1896, has varied from 77.2 to 32.4, the last five years showing the lowest figures.

The death-rate from consumption has also been steadily declining for many years past.

Philadelphia has always enjoyed a distinction as among the healthiest



Sanitarium Steamer.

large cities in the world. The death-rate has not varied greatly from year to year. The record of deaths is complete and accurate, while the estimated population between the census years is equally reliable, being approximately verified by the census figures, hence the death-rate can be depended on as giving a faithful representation of the state of the city's health.

The death-rate of Philadelphia for the past ten years, 1887-1896, was as follows :

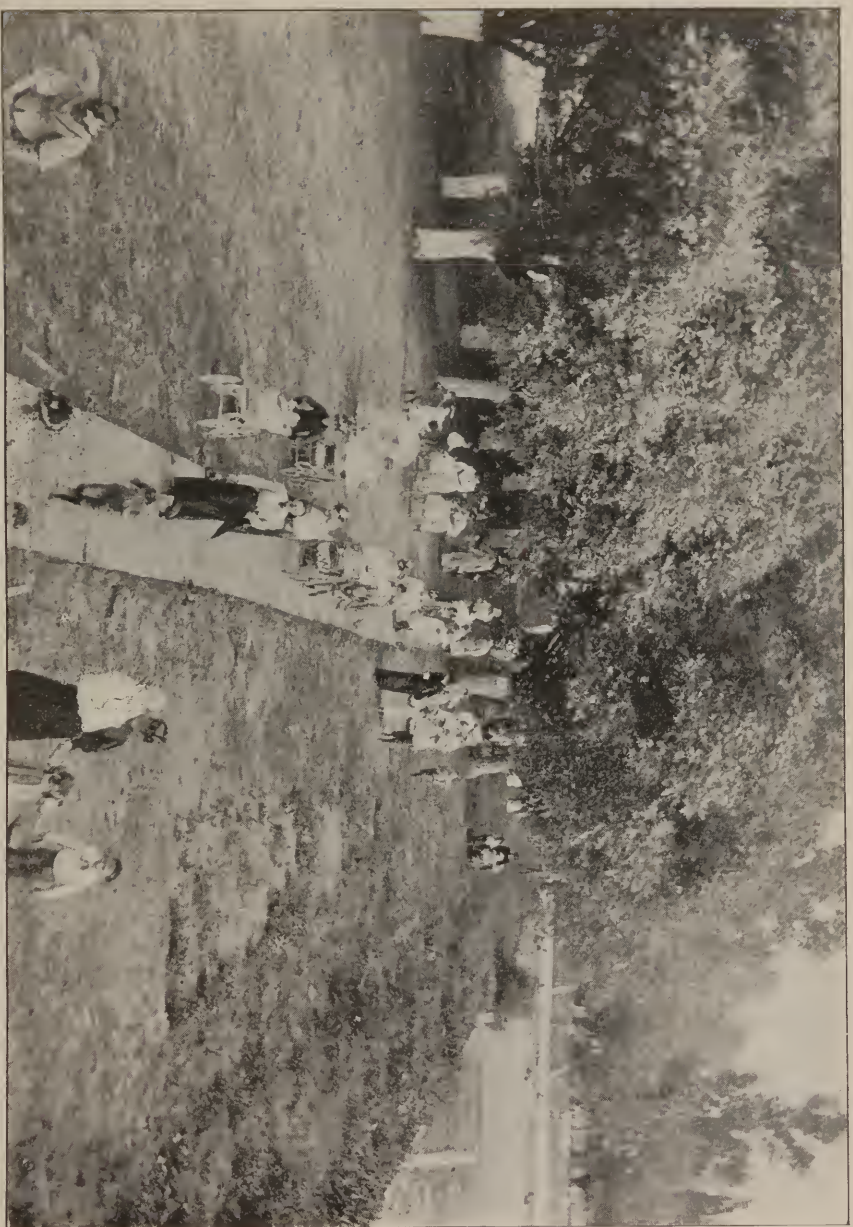
| | |
|------|-------|
| 1887 | 21.85 |
| 1888 | 20.04 |
| 1889 | 19.74 |
| 1890 | 20.76 |
| 1891 | 21.85 |
| 1892 | 22.25 |
| 1893 | 21.20 |
| 1894 | 19.90 |
| 1895 | 20.44 |
| 1896 | 20.17 |

There are many conditions that contribute to Philadelphia's salubrity. There are the natural advantages of location, the moderate climate, the very large number of dwellings permitting, as a rule, of most families being domiciled in separate houses, thus preventing overcrowding, and the growth of the tenement house system; the cheapness of living and the almost unsurpassed variety and excellent quality of food supplies; the thriftiness of the people on account of the almost certain employment of the masses depending on the extensive industrial advantages of the city; the absence of that keen competition and struggle for wealth that so characterizes such cities as New York, so liable, if continued, to end in premature death; the unstinted liberality that provides for all conditions of men, the sick, the helpless, and the unfortunate, from whatever cause, and the excellent sanitary and general administrative government that provides for the comfort and guards the health of the community.

The progress of the city, from 1682 to the present day, has been steady and surprising and shows how well its founder planned for a great future in which he had the most uncompromising faith.

The Sanitarium, Red Bank, N. J.

Among the many noted charities particular to Philadelphia, mention should be made of the Sanitarium for Young Children, located down the Delaware, at Red Bank, N. J., just opposite the League Island Navy Yard. Its object is to prevent sickness and to alleviate disease among the poor children of the community. The Association which has supervision of this institution, was instituted in 1877, and the Sanitarium located on Wind Mill Island, in the Delaware, opposite the city. The first year after organization a few hundred children were provided for at Point Airy, at the



Grounds of the Sanitarium.

lower end of the Island. The third year thereafter (1879) the number of admissions swelled to 32,845. In 1886 the number had still further increased to 52,866. In view of the cramped space and the probability of the early removal of the Island, a beautiful park, comprising over eighty acres, was procured at Red Bank, N. J., a point of land conspicuous for its excellent location and for the beauty of the scenery. Here fifteen acres on the River front were fenced in and fitted for the accommodation of an indefinite number of children. Buildings were constructed for various uses, bathing-pools for the larger children and a bath-house for young infants, and a spacious hospital were soon provided. The grounds are completely shaded and under the trees are hammocks, swings, benches and chairs to accommodate the throngs that daily meet there.

The river ride from Market Street wharf is about seven miles and consumes about half an hour. For the purpose of adequate transportation, two fine iron steamers were constructed which accommodate about a thousand persons each. These steamers make hourly trips from the city at two points, one in the lower part and the other in the upper part, so as to accommodate the largest number of persons. As many as five thousand children and caretakers have been admitted to the Sanitarium Park in one day.

The season opens about the first of June and closes about the first of September; that is, the period called the heated term in which infants and young children, particularly among the poor, are so liable to suffer from disease. It has been proved by experience that nothing so speedily and so effectually contributes to the improvement of the health of children suffering from summer diseases, as removal to the fresh country air, and for this object the Sanitarium was organized. It offers the refreshing steamer ride, abundance of food, care, medical attendance, and nursing, and even clothing to the squalid without the cost of a cent to the beneficiaries. The total cost per capita to the Institution is not over ten cents.

During the eighteen years of which careful records have been kept, 1,545,675 persons, mostly children, have been carried to and from the Sanitarium without a single serious accident. The largest proportion of these persons are children under five years of age. It is among children at this period of life that the diseases of the heated term prove so fatal. At least thirty-five per cent. of all the deaths occurring in the city during the year are of children under five years of age; or, in other words, more than eight thousand children die annually, before they reach their fifth year. In this startling statement lies the incentive for the labors of the Sanitarium. It is a significant fact that soon after the organization of this charity the records of the Health Office show that there have been fewer deaths during the first quinquennial period of life than before its establishment, and therefore it is inferred that this charity has, in some degree, been a factor in reducing the mortality of the city.

The Sanitarium Association is composed of about sixty well-known citizens, many of them ladies. The cost for maintenance per annum is about \$12,000, nearly all of which is raised by annual subscriptions.

In looking over the various charities of similar kind at home and abroad, nothing is found comparable to it in the extent and scope of its benefactions. The first year of location at Red Bank the admissions were 70,933.

Since 1887 an increasing number of children has annually been provided for, so that in 1895 the total number of admissions was 174,481, and in 1896, 136,269. There is no limit to the capacity of the grounds, which comprise more than eighty acres, only a small part of which is now in use, so that provision is made for any possible demand for many years to come, the admissions depending entirely upon the facilities for transportation, which can be increased as the demand arises. The President is George D. McCreary, who is assisted by a board of active workers.



Ambulance.

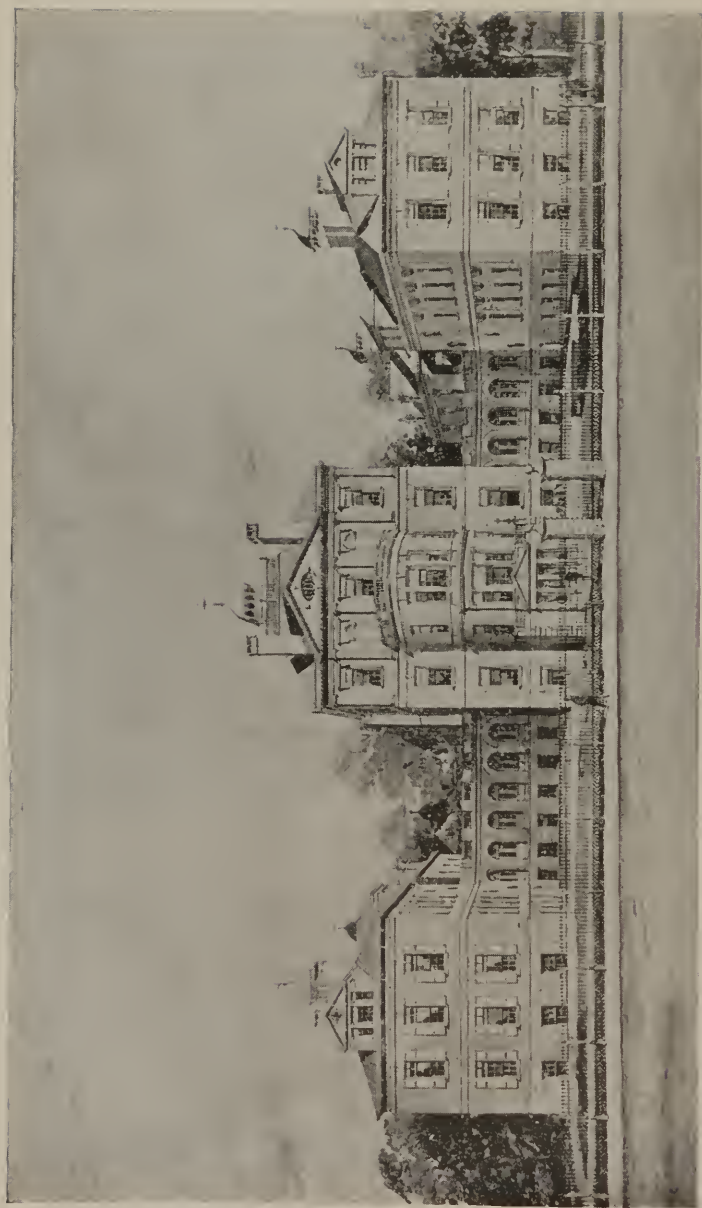
THE HOSPITALS OF PHILADELPHIA.

By Seneca Ebert, A. M., M. D.,

Professor of Hygiene, Medico-Chirurgical College.

Hospitals belong rather to the domain of Curative than of Preventive Medicine, and at first sight it may seem that there is but little reason in directing the attention of our visitors to those that grace our city. For, has not every large community and many of the smaller ones of the whole country similar institutions, beautifully constructed, well-equipped, and excellently managed for their beneficent work?

A consideration, however, of the influence that good hospitals exert in preventing the spread of sickness and disease, and in lowering the death-rate, will show that they are worthy of at least a passing thought, and,



Pennsylvania Hospital.



General View of Buildings of University of Pennsylvania.

when one recalls how much they have to do with the preëminence of Philadelphia as the great medical center of America, a few words concerning some of them will surely not be amiss.

In the first place, she has no rival here, and few, if any, abroad, in the number and capacity of these homes for the sick and wounded. Upwards of twenty-five general hospitals and almost, if not quite as many, special ones, together with several independent dispensaries, give succor to fully 40,000 ward cases, and almost a quarter of a million dispensary patients annually. For the support and maintenance of these the State, the City and generous individuals unite in contributing upwards of one million, yes, almost two millions of dollars; surely it would be difficult to express in words the good which these abstract figures represent.

In the Pennsylvania Hospital, between Eighth and Ninth Streets and



University Hospital.

Spruce and Pine, we have the oldest institution of the kind on the Continent. It was founded in 1751; Benjamin Franklin and Drs. Thomas and Phineas Bond being among those most active in its inception and establishment. Some of the old buildings, erected in 1755, are models of Colonial architecture and are still in use; while the Memorial Pavilions, but recently completed, furnish samples of the highest types of hospital construction of the present day. Figures may be tiresome and may carry but little weight, but since the day Old Pennsylvania first opened her doors to the afflicted of the city, 137,107 in-door patients have been cared for, 93,459 of whom have been poor and practically entirely supported at the expense of the institution. It should also be noted that

the Kirkbride Hospital for the Insane, with its beautiful natural park of about 100 acres in West Philadelphia, is an integral part of this hospital.

The Philadelphia City Hospital, or "Blockley," as it is more commonly termed, from its site, is the largest hospital, in point of number of beds and of in-door patients, in the country, and one of the largest in the world. This must not be confounded with the Municipal Hospital, which receives those suffering from contagious diseases especially, and which has been so fully described in another article that further mention is unnecessary.

Each of the great medical schools, for which Philadelphia has long been



Polyclinic and College for Graduates.

noted, has its own hospital, thoroughly equipped with everything demanded for the most advanced medical and surgical teaching. Here the respective students receive the greater part of their clinical, bedside and ward-class instruction, though all are admitted to the clinic and wards at Blockley, and to a number of the other great hospitals throughout the city. It is no easy thing to instruct almost 3,000 students from the living patients, yet it can be truthfully said that nowhere else can the medical under

graduate find such opportunities for seeing and studying clinically disease in all its protean forms as here in Philadelphia, moreover, the crowded condition of these college hospitals and the readiness with which patients avail themselves of their benefits, show the confidence in the ability as well as the fame of the operators and teachers connected with them. In fact, Jefferson College has for a long time claimed that not more than one hospital in the world has exceeded its own in the average daily number of applicants.

Apropos of the College Hospitals, there are two recent additions to



Medico-Chirurgical Hospital.

these which no visitor to the city at all interested in the profession of medicine should fail to see. One of them is the William Pepper Clinical Laboratory of Medicine, connected with the Hospital of the University of Pennsylvania, which is thoroughly equipped and admirably adapted for the scientific study of disease in all its forms.

The other is the new Clinical Amphitheatre of the Medico-Chirurgical College, conceded by all who have seen it to be not only the largest but the finest building of its kind and for its purpose, either here or abroad. One of the greatest living English surgeons but recently declared it to be "the greatest monument to modern medical science," and remarked in addition that he was "glad he had been made jealous" by it. Constructed almost entirely interiorly of steel and marble, with every precaution for thorough asepsis and for the accommodation and convenience of a large body of students, it also furnishes to the sanitarian the solution of some interesting problems in warming and ventilation that must be seen to be appreciated.

While almost every one of the religious denominations has its own hospital, and some of them more than one, it is a beautiful exemplification of Christian charity that from none of them is any sufferer barred by reason of his creed or color or race or nationality, and that to all the needy the services are given freely and without question.



New Amphitheatre, Medico-Chirurgical College.

Mention has already been made of the dispensary service and of the independent dispensaries, the oldest and largest of the latter being the Philadelphia Dispensary, founded in 1786. These supplement the work of the hospitals to a great extent, by caring for patients able to come and go, daily, and for the sick at home.

The ambulance service of the hospitals is another interesting feature. Almost every institution has one or more, and the city being divided

into emergency districts, persons accidentally wounded are cared for and transported to the nearest hospital with the least possible loss of time.

Lastly, in these days when the trained nurse so ably supplements the physician or the surgeon, her place of training must not be overlooked.



Old Philadelphia Dispensary.

Almost every hospital of the city has now its nurses' school, and the proficiency of the graduates from each shows that none neglect and that all are awake to the qualifications required of their pupils. The Training School of the Lying-In Charity, founded in 1828, is ante-dated by but one other nurses' school in the world.



Womans' College.



At Work, Veterinary Hospital.

Veterinary Sanitary Science, and Inspection of Meat and Milk University of Pennsylvania.

This branch is taught by a series of lectures in which the following topics are fully discussed: Origin of Sanitary Science; Enzoötic, Epi-zoötic and Panzoötic Diseases; Influence of Civilization and Traffic on Animal Plagues; Aptitude; Immunity, Contagion, Infection and Miasm; their origin, nature, diffusion, reception and mode of access; prevention and suppression of contagious diseases; general prophylactic, preventive and repressive measures; utilization of the carcasses. Disinfection and disinfectants. Inspection of meat: general physical and chemical properties of the meat of various animals used for food; principal qualities of meat; noxious and injurious meat; meat undergoing putrid decomposition; meat in constitutional or blood diseases; meat in cachectic conditions; meat infected with animal parasites; echinococcae, cysticercus, psorospermine and trichiae. Meat infected with vegetable parasites; actinomycosis, anthracoid diseases, contagious pleuro-pneumonia, tuberculosis, etc. Inspection of milk: physical properties and chemical constituents of milk. Adulterated milk and its detection. Abnormal constituents of milk.

Museum.

The Museum of this department has grown rapidly since the organization of the Veterinary Department, both through the preparations made in the dissecting-room, and through the liberality of veterinarians. It contains a large number of anatomical and pathological veterinary specimens.

Hospital.

The Hospital offers the most extensive and complete accommodations for sick animals to be found in America.

Third-year students are placed directly in charge of cases, and, under the direction of the House Surgeon, keep the clinical records, administer the medicines, attend to the surgical dressings and are allowed, under the supervision of the Clinical Professors, to perform whatever operations are necessary for the safety of the animal. Two students from the Third-year Class are assigned, in alphabetical order, to reside in the Hospital for two weeks at a time. They receive the animals as they enter the clinic of the Hospital.

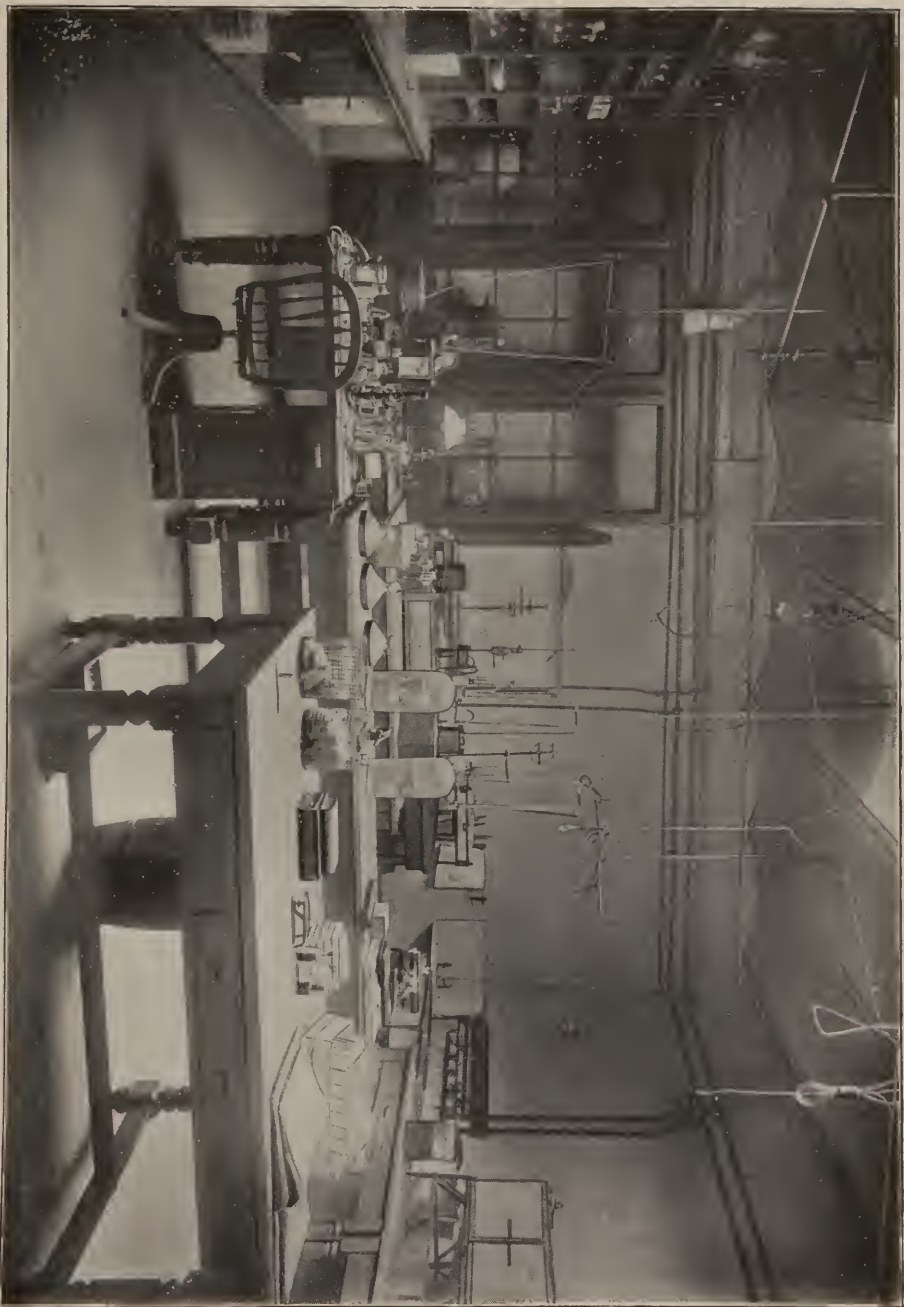
A detail from the Second-year Class assists in compounding all medicines used in the Hospital.

The large number of animals in the wards of the Hospital, and those from the extensive Free Dispensary practice of the Hospital treated at the clinic daily, from 8 to 10 A. M., furnish abundant material for clinical lectures and practical instruction.

2,974 animals were treated in the Hospital during the year ending August 31, 1896.

Horseshoeing

In addition to shoeing for lameness, a large amount of ordinary shoeing is done at the forges of the Hospital, affording ample experience in methods demanded by different classes of horses, and by the various forms of the horse's foot.



Laboratory, City Hall.

Division of Bacteriology, Pathology and Disinfection of the Board of Health.

This division of the Bureau of Health was organized in May, 1895. As its name implies, it has for its object investigations bearing upon those questions of Bacteriology, Pathology and Disinfection that relate to the public health.

The scope of the work of this division includes:

The diagnosis by laboratory methods of suspected cases of Diphtheria, Tuberculosis, and Typhoid Fever, and the examinations of materials from other maladies which may seem to jeopardize the health of the city, by their liability to dissemination.

The preparation of diphtheria antitoxin.

The testing of the efficiency of the various methods used by the Board of Health for the disinfection of premises.

The regular bacteriological examination of the water supply of the city, and

The systematical bacteriological examination of the milk supply.

From the organization of the Laboratory to September 1, 1897, the work done may be summarized as follows:

Diphtheria.—14,288 cultures from 6,028 cases of suspected diphtheria have been examined and reported upon. Of these cases 3,676, or 61 per cent., showed the presence of diphtheria bacilli; 1,760, or 29 per cent., did not contain diphtheria bacilli; and 592, or 10 per cent. were of doubtful nature.

Typhoid Fever.—Diagnosis by the Widal reaction:

Since February 16, 1897, to September 1, 1897, there have been examined 1,023 samples of blood from 793 cases of febrile disorders. In these examinations there was a discrepancy between the clinical and laboratory diagnosis in a trifle less than 3 per cent. of the whole number of cases.

Sputum.—In the same interval of time 912 samples of sputum have been examined, and the results sent to the physicians in attendance upon the cases.

Antitoxin.—We have supplied for the use of the Board 2,355 bottles of diphtheria antitoxin, each having a value of 1,000 units. For the preparation of this material, 140 horses have been employed; of these, nine are at present in use.

Since February 16, 1897, sixty-one samples of water have been analyzed.

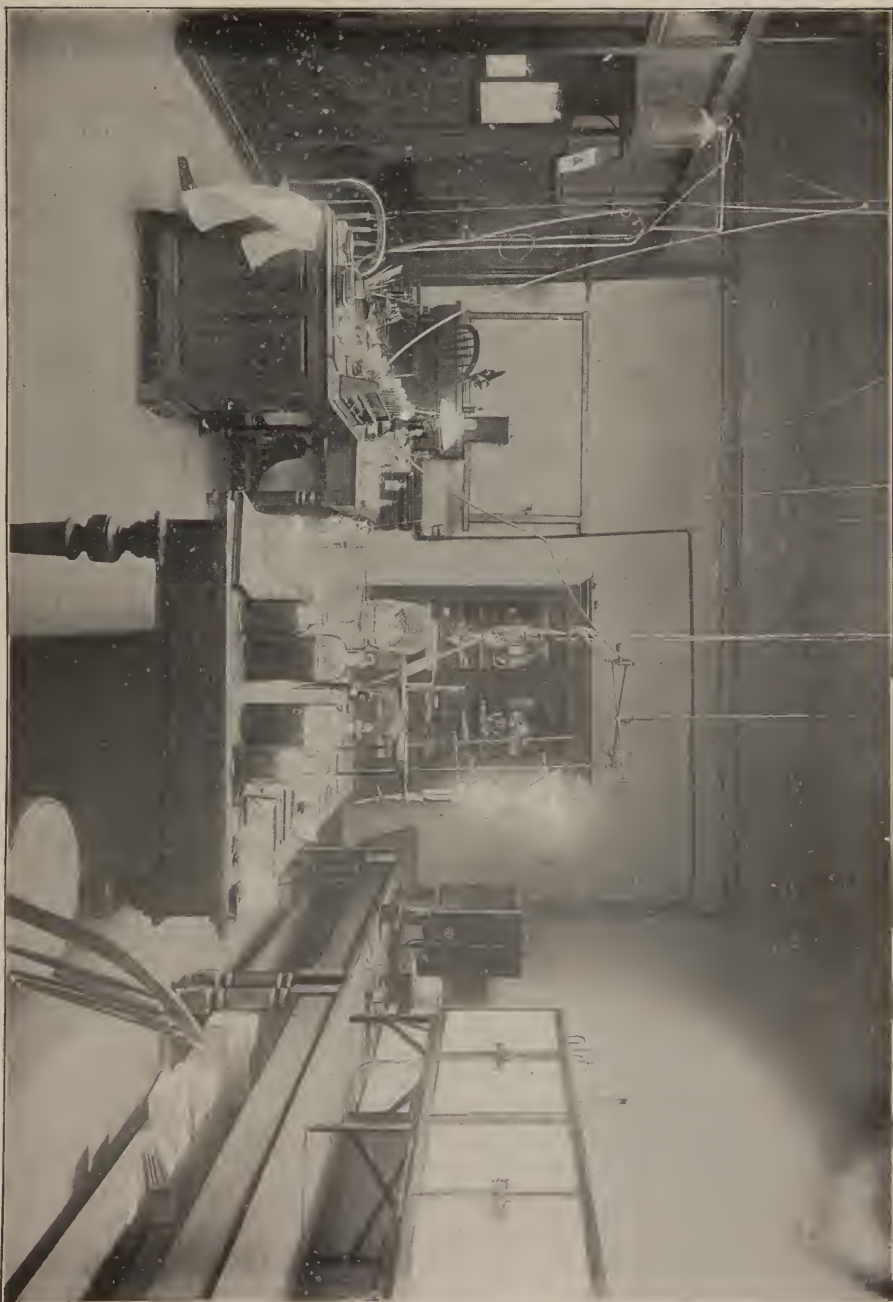
In addition, several of the methods for the disinfection of premises have been subjected to careful examination, by approved methods.

The systematic study of the milk supply is not as yet sufficiently far advanced to admit of a statistical report.

The average daily work of the Laboratory is 30 examinations of one kind or another.

All examinations and work done in the Laboratory are free of charge.

In addition to the manifest advantage that the work of the Laboratory is to the Board of Health, from the standpoint of practical sanitation, it is interesting to note its probable equivalent from the monetary side. Calculating the value of the work per year from the lowest charges usually made for such examinations and materials, we have the equivalent of an annual expenditure of over \$34,000, as follows:



Laboratory, City Hall.

| | |
|---|-------------|
| 10,000 examinations, at \$3.00 each. | \$30,000 00 |
| 200 water samples, at \$5.00 each. | 1,000 00 |
| 2,000 bottles of antitoxin, at \$1.75 each. | 3,500 00 |
| | <hr/> |
| | \$34,500 00 |

In other words, it would cost the city approximately \$34,500 a year to have this work done by the piece by private parties. As it is, the cost to the city for this work is a trifle over \$10,000 annually.

The laboratories of the Board of Health are located in rooms 715 and 717, on the seventh floor of the City Hall, where visitors will be made welcome, and the methods of work fully explained.

The Laboratory is under the direction of Dr. A. C. Abbott, assisted by Dr. Herbert Pease, Dr. Wm. Gillespie, Dr. Alonzo Stewart, and Dr. May Bell Garvin.

LABORATORY OF HYGIENE.

University of Pennsylvania.

The Laboratory of Hygiene of the University of Pennsylvania was formally opened on February 22, 1897.

The building was a gift to the University from Mr. Henry C. Lea, of this city, and it was equipped through the liberality of the late Henry C. Gibson, Esq., of Philadelphia. Within a very short time after the organization of the Department a fellowship in Hygiene, the income from which to the holder is \$500 annually, was generously endowed by Mrs. Scott as a memorial to the late Thomas A. Scott, Esq., of Philadelphia.

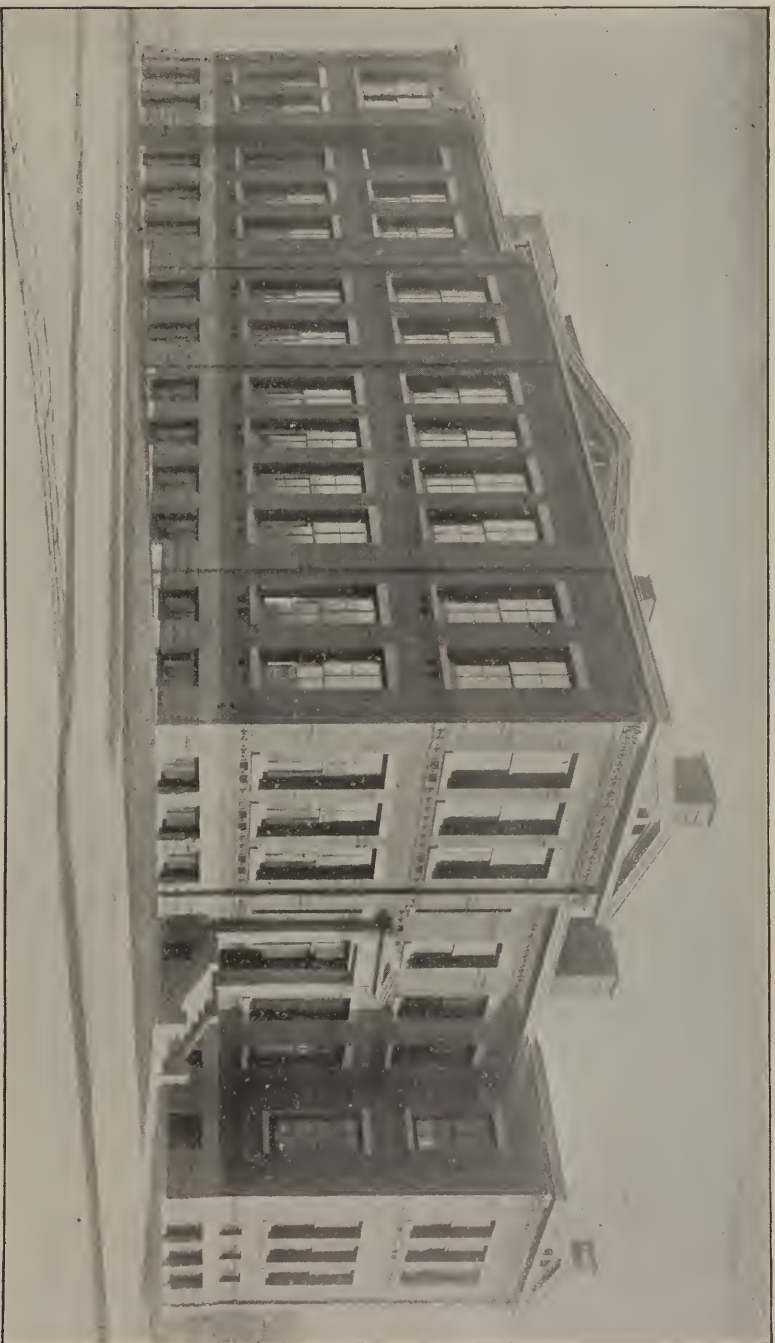
The Laboratory will be open during the days of the meeting, and visitors interested in the practical study of such sanitary problems as come within the scope of a laboratory will be made welcome.

The object of the Laboratory is to afford instruction in Hygiene and Bacteriology to students of medicine, and to offer facilities for work to investigators who are prepared to undertake advanced research in these important fields.

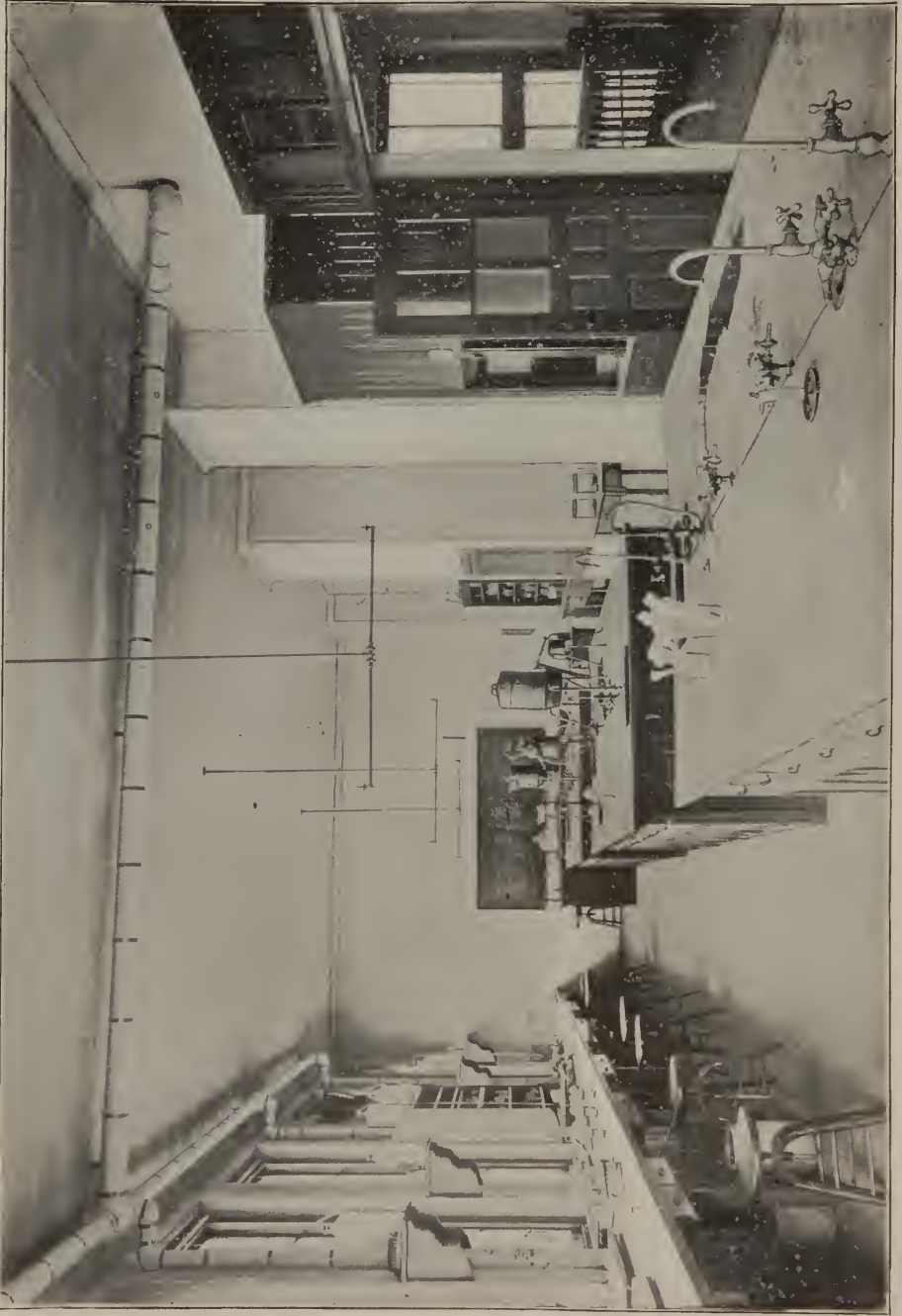
The routine instruction of the Laboratory consists in lectures and practical class work in Hygiene; including studies upon Air, Water, Soil, Drainage, Ventilation and Heating, Foods, Clothing, Disinfection, Management of Contagious Diseases, etc.; and in Bacteriology; including the apparatus employed, culture media used, the isolation of bacteria in pure cultures, the identification of species by microscopical and biological tests, the determination of pathogenesis, and the practical application of methods and results to antiseptic technique and to the study of air, water, soil and the manifold other sanitary problems in which bacteria play so important a part.

The work of the Department is under the direction of Professor A. C. Abbott, assisted by Dr. D. H. Bergey and Mr. E. G. Horton.

The building is located at the southeast corner of Thirty-fourth and Locust streets. The Angora and the Darby cars running west on Walnut street pass within one block of the Laboratory.



Laboratory of Hygiene, University of Pennsylvania.



Bacteriological Class Room, Laboratory of Hygiene, University of Pennsylvania.

The New Laboratories of the Jefferson Medical College Hospital.

By W. M. L. Coplin, M. D.

The Laboratories constitute a part of the Hospital, and are intended for the study of the disease in all its varied forms. The Hospital being worked to its fullest capacity by the enormous charity out-patient service and its always busy wards, demanded that space be secured somewhere else for the new Laboratories, and the Board of Trustees decided to fit up temporarily the recently purchased Hamilton and Diesinger building, southeast corner of Tenth and Moravian streets, midway between Walnut and Sansom streets, on the east side of Tenth street. In the fourth, fifth and sixth stories of this building, which is now known as the Hospital Annex, the new Laboratories are located. The entrance is on the south side of Moravian street. The entire interior of the floors used was completely torn out and renovated from top to bottom. New plumbing placed throughout, walls painted, electric lighting introduced and steam heat arranged for every floor. The building has light on three sides, the windows being large and so located as to afford ideal light for the work intended. Each story has 2,430 square feet of floor space, and affords room for thirty-eight working desks.

Normal Histology.

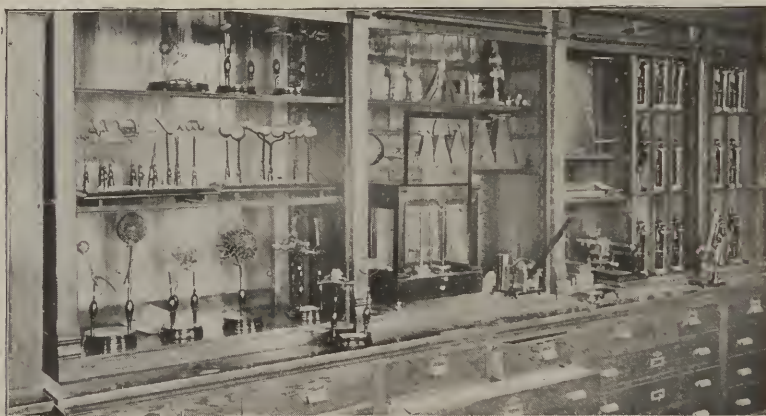
On the fourth floor is located the laboratory of normal histology, where the healthy tissues and secretions of the body are studied. Here investigations into the conditions which constitute health are connected, and elaborate studies of variations which may exist without there being any evidence of disease. Individual desks are arranged around the room for the accommodation of students, and the easy work of investigators. Near the door, in the center of the room, is located a large dust-proof case, in which the expensive apparatus is stored, while on the wall around the room are numerous cases for the storing of reagents and materials awaiting investigation. The laboratory is equipped with every necessary appliance for a complete, comprehensive and thorough study of the healthy tissues, and in addition to expensive microtomes, chemical apparatus and elaborate blood appliances, the laboratory is supplied with forty microscopes. Adjoining the main laboratory room on this floor is the record room, in which the records of investigations, reports of cases and all archives of all the laboratories will be kept. This room is fitted up with cases for receiving the record books and files for storing all reports.

Pathological Histology.

The fifth floor is the laboratory of pathological histology, in which diseased tissues will be studied. The student spends his first year in the laboratory of normal histology, and during his second year is advanced to the fifth floor, where he begins his study of diseased tissues. This floor is a duplicate of the fourth floor, as far as the general arrangement of the cases and desks is concerned, but materially differs in that it is supplied with every appliance for investigation into disease instead of health. In addition to all appliances for routine work the laboratory is supplied with



View of one-half of the Bacteriologic Laboratory, showing the individual desks, incubators, projection apparatus, etc.



View of three sections of one of the cases for storing apparatus. The laboratories have sixteen such sections. Part of the microscopic section is shown.



View of one-half of the Laboratory of Pathology Histology. The Laboratory of Normal Histology is a full duplicate.

instruments for studying changes in the blood and circulation, the study of inflammation and of tumors, and disease in all its protean forms. In this laboratory are thirty microscopes of higher power and more perfect workmanship than those of the floor below.

Adjoining the main laboratory room is a preparation room in which material for demonstrations is made ready for the student. This room also contains a most elaborate photomicrographic outfit with arrangements for gas and electric illumination. Next to the private preparation room is a dark-room fully supplied with all necessary appliances for the preparation of photomicrographic and X-Ray negatives.

Laboratory of Bacteriology.

On the sixth floor, far above the tops of surrounding houses, is the Laboratory of Bacteriology, supplied with all the necessary apparatus for comprehensive investigations into the subject of bacteriology. Sterilizers, incubators, apparatus for examining foods for adulteration or for injurious substances of any kind, apparatus for studying water filtration and sewage purification and all collateral branches of preventive medicine. This laboratory is supplied with the most modern microscopes of the highest magnifying power.

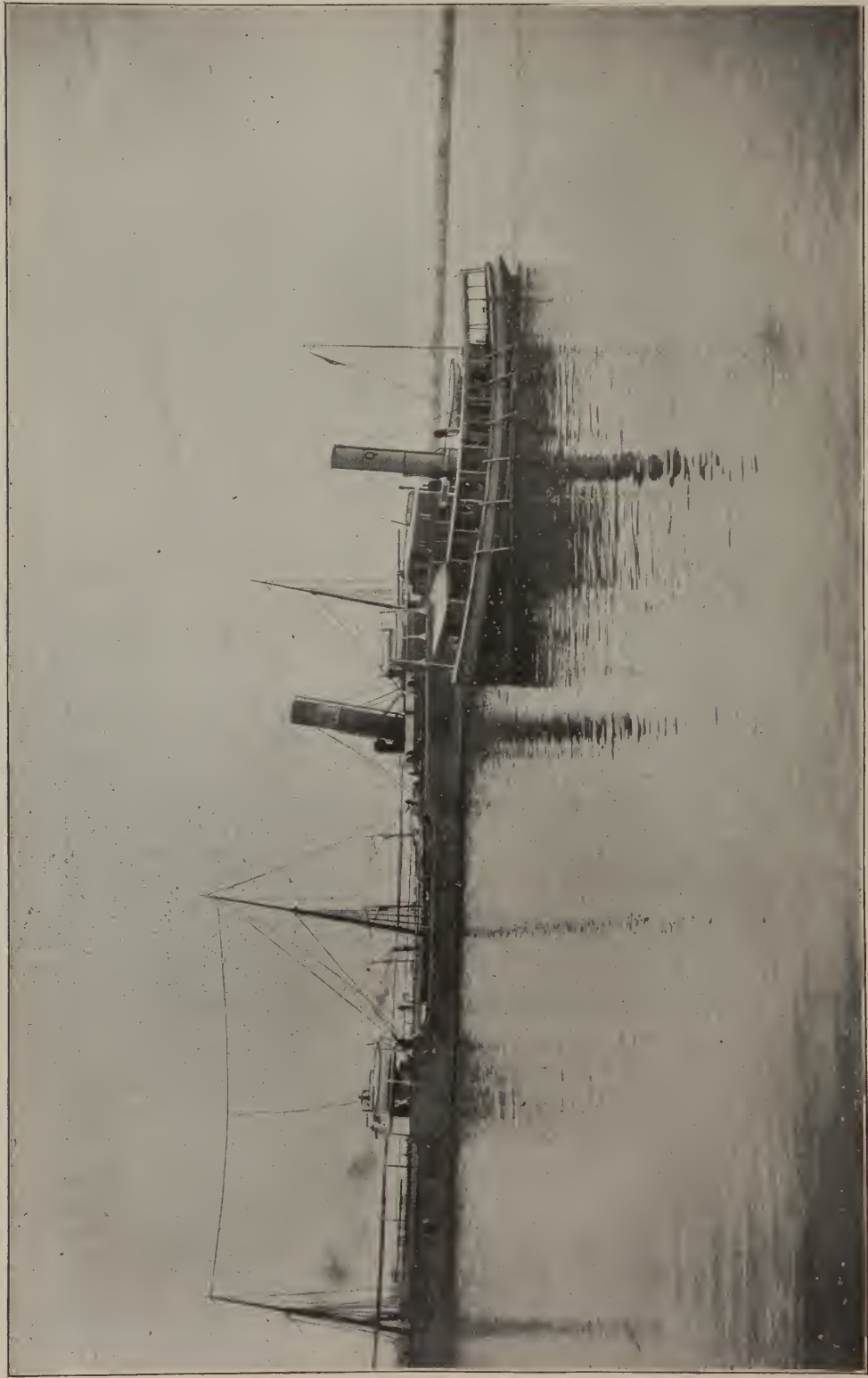
Adjacent to the main laboratory is the private laboratory and preparation room in which the Director and his assistants conduct original work and prepare the materials for demonstrations and lectures. There is also a storage room in which supplies are stored.

The desks and cases are of antique oak, and were made after special designs expressly for these laboratories, the idea being to make all the out-fittings of the most approved modern design so that when the new hospital is completed it will be only necessary to move into it.

The present plans demand tearing down the building in which the laboratories are at present located and, with the adjoining properties, which the hospital now owns, erecting a large new hospital with very much increased facilities and sufficiently commodious to accommodate the new laboratories.

The Pennsylvania State Quarantine Board.

In accordance with the provisions of the law of 1893, establishing a "State Quarantine Board for the Port of Philadelphia," the Board was required to vacate the property known as the Lazaretto, the old historic quarantine station of the Board of Health of Philadelphia, on the first day of July, 1895. The Legislature of 1895, however, extended the limit of occupancy until October first of that year, and made a modest appropriation for the acquirement by purchase or lease of a new property and for the erection of buildings thereon. It was at once evident to the Board that with the means at its command it would be impossible to erect new buildings. It, therefore, after careful inspection and survey of the shores of the Delaware below the City of Chester, decided to lease a property



At the State Quarantine, Marcus Hook.

located in the old borough of Marcus Hook, on which there were already substantial buildings. Being directly on the State line, the Board is thus enabled to protect all ports on the Delaware within the territory of the State. The site is twenty miles below Philadelphia, and ten miles below that of the old station, commanding an uninterrupted view for fifteen miles down the river. The property comprises about ten acres, with a river front, securely bulkheaded with stone and heavy timber, of eight hundred feet. The shore is bold, and the soil a clean gravel free from marsh. The Board has constructed, at an expense of somewhat less than \$3,000, a substantial and handsome pier five hundred feet in length, out to twelve feet of water at low tide, and terminating in a strongly-built wharf, fifty feet square, on which stands a pavilion of 20 x 25 feet in area, with a flag-pole one hundred feet high. As the main channel comes very close in to the Pennsylvania side at this point, the visits to vessels are accomplished in much less time than from the old station.

The boat at present in use for visiting vessels is an ordinary steam tug, altered to meet the requirements of the service, and temporarily leased. It is not well suited for the purpose, however, and it is expected that the Legislature will make an appropriation for the construction of a boat to be built under the eye of the quarantine physician, with special reference to the exigencies of the case. This boat will have a high rate of speed in order to cause as little detention to vessels as possible in making her way through heavy ice, and will afford comfortable quarters for the officers and crew.

There are three comfortable residences and an administration building on the property. The grounds are tastefully laid out and shaded by fine old trees. The central building, opposite the head of the pier, contains accommodations for the captain of the boat. The residences on either side are occupied by the deputy quarantine physicians. There are also three good barns and stables on the place. By the courtesy of the Maritime Exchange, telegraphic communications with the city office in Philadelphia is maintained during the day through the Exchange station immediately adjoining. During the night the general office at Linwood is used. Personal communication can be had with Philadelphia by the trains of the Philadelphia, Wilmington and Baltimore Railroad, and of the Baltimore and Ohio Railroad, at frequent intervals and within forty-five minutes.

The service is, for the present, one of observation or inspection only, there being no provision for detention or disinfection. If sickness of a communicable nature is discovered on a vessel, or if circumstances lead to the suspicion that the vessel is herself infected, she is simply remanded to the Federal quarantine down the bay. The Chief Executive of the State, however, may, at any time, if in his judgment the public welfare requires such action, re-establish a fully-equipped quarantine station with modern appliances for disinfection, hospitals and barracks.

The organization of the Board at present is as follows :

Richard A. Cleemann, M. D., President; appointed by the College of Physicians of Philadelphia.

Benjamin Lee, M. D., Secretary; ex-officio member, as Secretary of the State Board of Health.



At the State Quarantine, Marcus Hook.

Henry C. Boenning, M. D., Quarantine Physician; appointed by His Excellency, the Governor.

Thomas Winsmore, Esq., appointed by the President of the Philadelphia Maritime Exchange.

Theodore B. Stulb, Esq., ex-officio member, as Health Officer of Philadelphia.

Henry M. Dubois, Esq., Attorney at Law, appointed by His Honor, the Mayor of Philadelphia, and

Ernest Laplace, M. D., appointed by His Excellency, the Governor.

The executive officer of the station is the quarantine physician, Dr. Henry C. Boenning. The deputy physicians residing at the station are Dr. J. M. B. Ward and Dr. Joseph R. Caldwell.

The City of Philadelphia enjoys a degree of protection from the introduction of infection from other ports amounting to absolute security. Not a single case of contagious disease has been observed within her limits, or indeed, within those of the entire State, during the past year, which found its entrance through the great gates of the Delaware.

Guides to Many Interesting Places.*

INDEPENDENCE HALL, on Chestnut Street, between Fifth and Sixth Streets, the scene of the signing of the Declaration of Independence, is open all week-days. The old hall of the Continental Congress is maintained in its original appearance. The museum of relics of the last century maintained here also includes the Liberty Bell and many souvenirs of Washington. A number of patriotic societies, including the G. A. R., now have headquarters in the building.

THE CITY HALL (Public Buildings), at the intersection of Broad and Market Streets, may be visited upon every week-day to advantage. Elevators to all floors.

THE UNIVERSITY OF PENNSYLVANIA and its beautiful library building are accessible to the stranger upon week-days. Reached via Chester Avenue or Darby cars out Walnut Street.

THE UNITED STATES MINT, upon Chestnut Street, below Broad, is open to visitors, who are conducted through the various departments by guides from 9 A. M. to 2 P. M., except upon Sundays and holidays.

THE MASONIC TEMPLE, at Broad and Filbert Streets, is open to visitors upon Thursdays, in fair weather, from 10 A. M. to 2 P. M. This noble building is the most costly structure devoted to secret society purposes in America. Many of the rooms are decorated in a highly artistic manner.

ODD FELLOWS' TEMPLE. This beautiful building is located upon Broad Street, above Arch. It is open to visitors every Thursday, from 10 A. M. to 4 P. M., except when stormy weather occurs.

GIRARD COLLEGE, west of Ridge and north of Girard Avenues, is open daily, except Saturdays and upon May 20th. Intending visitors may obtain

* Published by courtesy of the Trades League of Philadelphia.



THE NEW TEMPLE,
BROAD AND CHERRY STREETS, PHILADELPHIA.
120 feet on Broad St ; 170 feet on Cherry St.

tickets of admission from members of the Board of Directors or at the office, Girard Bank. Clergymen are excluded under the provisions of Mr. Girard's will. Reached via Ridge Avenue, Girard Avenue, Eighteenth or Nineteenth Street car lines.

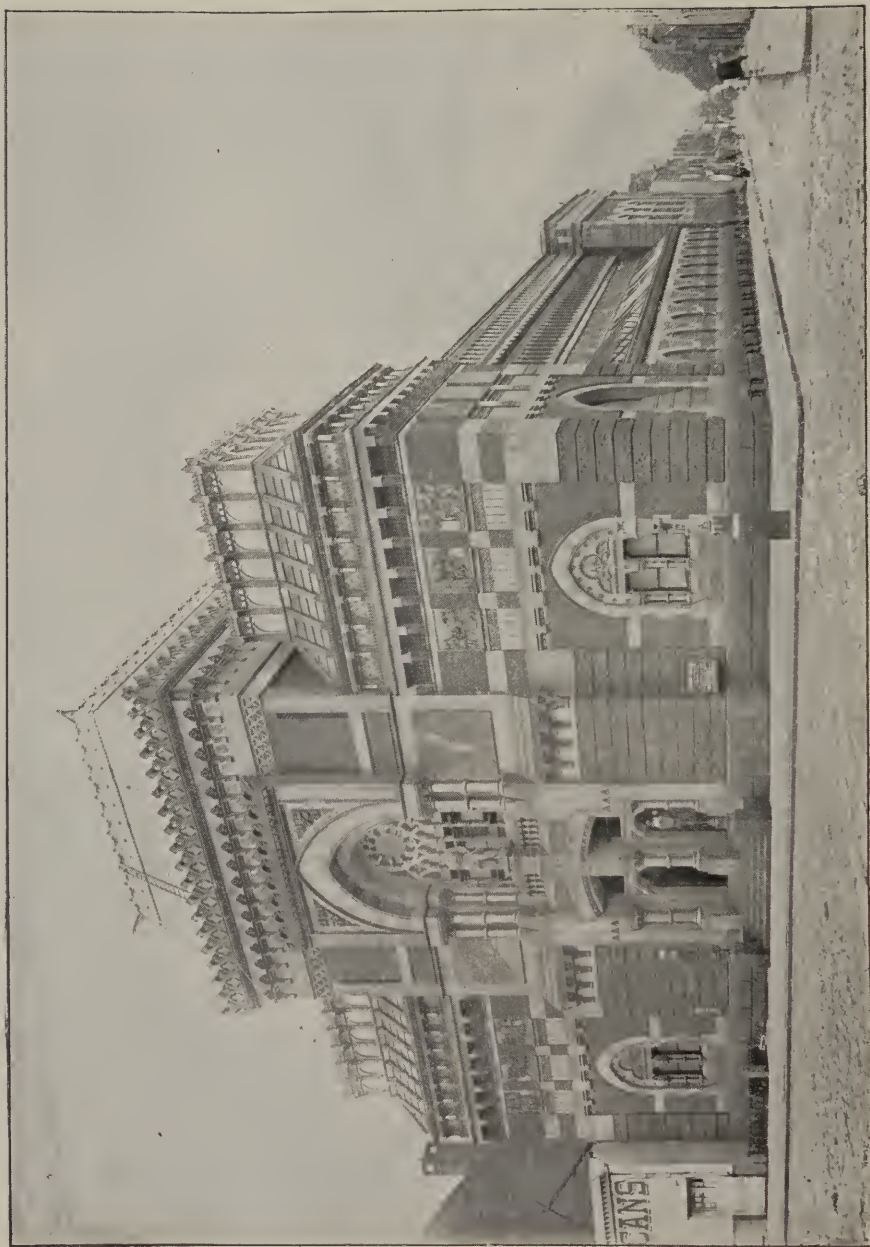
THE ACADEMY OF FINE ARTS, located at Broad and Cherry Streets, is open free upon Fridays and Sundays, and upon other days at an admission of twenty-five cents, the hours being from 9 A. M. to 5 P. M. This is the oldest art institution in America and still one of the most progressive. The beautiful galleries are at all times well worth a visit, and during special exhibitions attract many art lovers from other cities.



Egyptian Room, Masonic Temple.

THE DREXEL INSTITUTE, at Thirty-second and Chestnut Streets, may be visited as follows: The central court, museum, library and reading-room are open to the public every day, except Sunday, from 9 A. M. to 6 P. M. On Saturday the entire building is open to visitors. During the winter months the museum and library and reading-room are open to the public three evenings a week. The museum has valuable collections of textiles, ceramics, carvings, in ivory and wood, metal work, etc. In the library is the Childs Collection of Manuscripts. No card of introduction of any kind is required for admission.

THE CENTRAL MANUAL TRAINING SCHOOL, northeast corner Seventeenth and Wood Streets, is open to callers week-days, except Saturdays, from 9 A. M. to 2.30 P. M.



Academy of the Fine Arts, Broad Street above Arch Street.

THE FRANKLIN INSTITUTE, with its valuable scientific and technical library, upon Seventh Street, above Chestnut, is open to the public from 9 A. M. to 6 P. M., upon week-days.

THE WAGNER FREE INSTITUTE OF SCIENCE, at Seventeenth Street and Montgomery Avenue, opens its museum of natural history from 2 until 5 P. M., upon Wednesdays and Saturdays; library open daily.

THE HISTORICAL SOCIETY OF PENNSYLVANIA occupies a substantial building at the southwest corner of Thirteenth and Locust Streets, and is open every week-day.

The museum of the ACADEMY OF NATURAL SCIENCES, which institution



Ridgway Branch Philadelphia Library.

is located at Nineteenth and Race Streets (Logan Square), is open free to visitors upon week-days, from 9 A. M. to 5 P. M. Students and others interested in the work of the Academy are also admitted to the library.

THE ART AND MECHANICAL SCHOOLS OF THE SPRING GARDEN INSTITUTE, at Broad and Spring Garden Streets, are open to visitors from 9 A. M. to 2 P. M., week-days, except Saturdays, September to June, inclusive. From October to March, inclusive, they are also open in the evenings and are most interesting.

The rooms of the PHILOSOPHICAL SOCIETY, located in their quaint old building at the northeast corner of Independence Square, are open week-days, from 10 A. M. to 1 P. M., and upon Sundays, from 10 to 1 o'clock. The library of this time-honored institution is one of the most valuable in the city.

CARPENTERS' HALL, of historic renown, at 322 Chestnut Street, is open daily, except Sunday, from 9 A. M. to 4 P. M.

THE PENNSYLVANIA MUSEUM, in Memorial Hall, West Fairmount Park, is open to the public every day in the year, from 9.30 A. M. until half an hour before sunset.

THE SCHOOL OF INDUSTRIAL ART, Broad and Pine Streets, is open to visitors week-days during the terms.

THE COMMERCIAL MUSEUM, occupying the old Pennsylvania General



Memorial Hall, Fairmount Park.

Office Building, upon Fourth Street, below Walnut, is very extensive. It embraces collections of raw materials and manufactured goods from many countries, and is of the greatest value to practical visitors, and especially manufacturers. Open daily, free of charge.

THE ROMAN CATHOLIC HIGH SCHOOL, at Broad and Vine Streets, is open upon week-days to the public, from 9 A. M. to 5 P. M.

The building of the LIBRARY COMPANY OF PHILADELPHIA, at the northwest corner of Locust and Juniper Streets, is open upon week-days, free to the public, from 8.30 A. M. to 6 P. M., and upon Sundays (for readers only), from 1 P. M. to 6 P. M.

THE RIDGWAY BRANCH OF THE PHILADELPHIA LIBRARY, including the Loganian Library, at Broad and Christian Streets, is also open at the above hours.

THE MERCANTILE LIBRARY, upon Tenth Street, above Chestnut, is open free to the public, between the hours of 8 A. M. and 10 P. M., daily.



Old Swedes Church.

THE DREXEL BUILDING, corner of Fifth and Chestnut Streets, the roof commanding a splendid view of the city and harbor, is open to visitors daily. Take elevator.

THE PHILADELPHIA COLLEGE OF PHARMACY was the first institution of the kind established this side of the Atlantic. It is the only college in Philadelphia devoted entirely to pharmaceutical education, and is the largest in the world. It was founded in 1821, and incorporated the following year.

The rooms of the BOARD OF TRADE, Bourse Building, are open week-



MAIN BUILDING, GIRARD COLLEGE.

days, from 9 A. M. to 3 P. M., in summer and in winter until 4 P. M., during which time visitors are welcomed.

THE BOURSE, located between Fourth and Fifth Streets, north of Chestnut, is the costliest commercial edifice in the city. (See description elsewhere.)

THE BUILDERS' EXCHANGE, upon Seventh Street, above Chestnut, containing a large permanent exhibition of high-grade building materials and supplies, is open every business day in the year, and affords a practical object lesson regarding the excellence of the work done in Philadelphia construction.

THE PENNSYLVANIA HOSPITAL, the oldest institution of the kind in America, is located at Eighth and Spruce Streets, may be visited between 2 and 4 P. M. daily.

OLD CHRIST CHURCH, upon Second Street, above Market, may be inspected any day upon application to the sexton.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION BUILDING, southeast corner Fifteenth and Chestnut Streets, may be visited between the hours of 9 A. M. and 10 P. M., upon week-days.

THE WOMEN'S CHRISTIAN ASSOCIATION, at the southwest corner of Eighteenth and Arch Streets, includes what is essentially a woman's hotel, with all the moral restraints and pleasures of a home. Its management shelters several hundreds of young women at nominal rates, finds employment and gives useful instruction. Ladies are allowed to patronize the fine restaurant at the top of the building. Admission daily.

HORTICULTURAL BUILDING, West Fairmount Park, is open daily, including Sundays, from 7 A. M. to sundown. This ornate structure was built as a part of the Centennial Exposition. With its wealth of tropical trees and plants, and its beautiful environment of flower gardens, it should be visited by all strangers.

A constant exhibition of valuable paintings in oil and water colors is maintained free to the public (except when otherwise advertised) in connection with EARLE'S ART STORE, upon Chestnut Street, above Eighth.

LAUREL HILL CEMETERY, upon the east bank of the Schuylkill River, is open to the public week-days. Reached via Ridge Avenue street cars or by carriage through East Fairmount Park. Other cemeteries are also accessible to all who have occasion to visit them.

THE ARMORY OF THE STATE FENCIBLES BATTALION, N. G. P., at Broad and Race Streets, is open daily, from 10 A. M. to 4 P. M., and in the evening after 7 o'clock, except in stormy weather.

The fine G. A. R. HALLS of Post 2, Twelfth Street, above Wallace; Post 1, Chestnut Street, above Twelfth, and of Naval Post 400, in Independence Hall, are open daily and in the evenings to callers when these posts are not in session. They are the repositories of valuable collections of relics of the war of '61-'65.

THE PENNSYLVANIA INSTITUTION FOR THE DEAF AND DUMB, Mt. Airy, Philadelphia, admits visitors (except during July and August), on Mondays, Wednesdays and Fridays, from 10 A. M. to 4 P. M. Reached via the Chestnut Hill trains of either the Pennsylvania or the Philadelphia and Reading Railroads and People's Line of electric cars.



Wissahickon Creek and Drive.

The shops and grounds of the UNITED STATES ARSENAL, Frankford, Philadelphia, may be visited upon week-days, between 9 A. M. and 4 P. M. Upon Sundays the grounds are open to the public.

Cards of admission to the COUNTY PRISON AND EASTERN PENITENTIARY may be had from the inspectors. (Consult City Directory.)

THE EDWIN FORREST HOME FOR ACTORS, at "Springbrook," Holmsburg, Philadelphia, is reached via local trains upon the New York Division of the Pennsylvania Railroad, the distance being about twelve miles from Broad Street Station. It is open to visitors upon Tuesdays, from 9 A. M. to 12 o'clock, noon, and from 3 to 5 P. M.

PRESS-ROOMS of the *Ledger*, at Sixth and Chestnut Streets; the *Times*, Sansom, above Eighth Street, and the *Inquirer*, Market, above Eleventh Street, may be visited late in the evening, and the great presses can be seen in operation.

THE DEPARTMENT HEADQUARTERS, G. A. R., southwest corner Fifth and Chestnut Streets, is open daily.

Splendid Terminals.

The new TERMINAL STATIONS of the Philadelphia and Reading Railroad, at Twelfth and Market Streets, and of the Pennsylvania Railroad, opposite the City Hall, are the two largest structures of the kind in the world; at the latter station 530 SCHEDULED PASSENGER TRAINS arrive and depart daily, 60,000 passengers being the DAILY AVERAGE, and between the hours of 5 and 8 o'clock P. M. 50 TRAINS arrive and 80 depart. The passenger travel to and from the Philadelphia and Reading, and the Baltimore and Ohio is also very large.

Financial.

Forty-eight banks and 58 trust and savings institutions care for the people's money. Banking capital, \$53,539,729; surplus, \$41,557,998; deposits, \$242,293,597. Four savings institutions have on deposit for the working people more than \$56,000,000.

It is a remarkable fact that during the "hard times" years just behind us the number of depositors and the total amount held by the savings concerns both increased.

Markets.

Philadelphia maintains thirty-five market buildings, located in various widely separated parts of the city.

Philadelphia's export and import trade for eight months, ending September 1st, was \$11,000,000 greater than for the same period of the preceding year.

The deep water front of Philadelphia harbor, including the Schuylkill River, adaptable for shipping, exceeds 33 miles.



Pennsylvania Railroad Broad Street Station.

The Bourse.

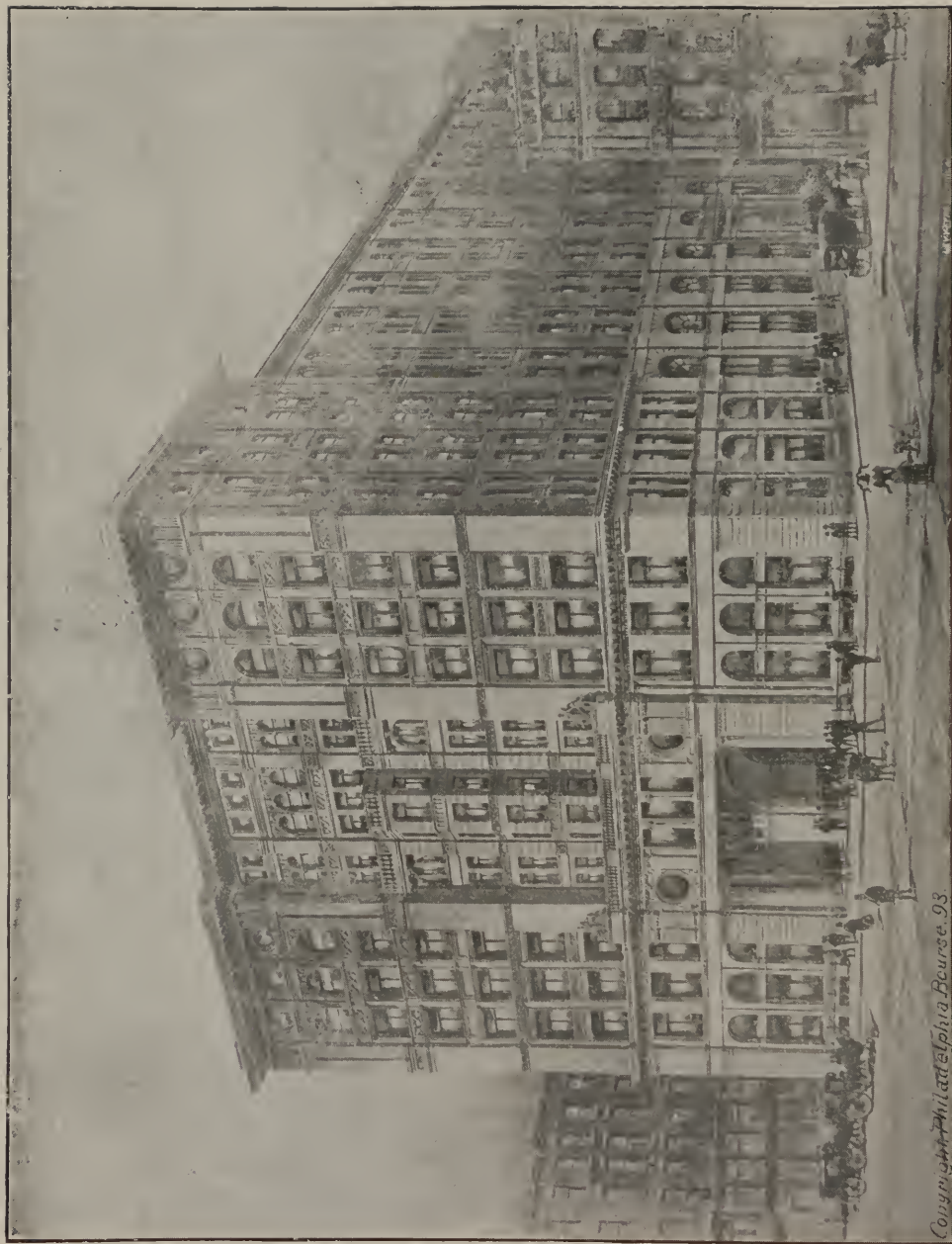
This splendid addition to our business edifices is, by far, the most notable and costly building of its kind in the city, and probably in the United States. Costing considerably above \$2,000,000, it stands as an achievement highly creditable to the large number of business men who have taken part in its creation. It is one of the places in Philadelphia which every stranger should see. With the exception of the main apartment, devoted to commercial interchange, and which is viewed from the gallery above, all parts of the building are accessible to visitors. The eighth floor contains a fine restaurant. The sixth floor is devoted to a permanent exhibition of manufactures, and during the greater part of the year free concerts are held in this department upon Wednesday evenings. The basement contains exhibits of machinery in motion and other attractive features. All of the important trade and commercial bodies of the city maintain fine offices in this building. The Trades League's handsome offices and assembly-room are upon the second floor, Fifth Street front.

Notable Business Buildings.

Visitors passing along the principal business thoroughfares of Philadelphia are impressed with the numerous magnificent structures, many of which are of recent construction, devoted to the purposes of banking, trust and insurance companies.

Among these lofty buildings are those of Drexel & Co., at Fifth and Chestnut Streets; Brown Bros. & Co., at Fourth and Chestnut Streets; Provident Life and Trust Co., Fourth and Chestnut Streets; Independence National Bank, Girard Life Insurance, Annuity and Trust Company, at Broad and Chestnut Streets; Bourse Building, on Fifth Street, above Chestnut, elsewhere described; City Trust and Safe Deposit, Tenth and Chestnut Streets; Penn Mutual Life Insurance Company, on Chestnut Street; Bell Telephone, Market Street, above Fourth; Chestnut Street National Bank, Chestnut Street, below Eighth; Commercial Union Fire Insurance Company, 416-20 Walnut Street; National Bank of the Republic, Chestnut Street, above Third; Fidelity Insurance, Trust and Safe Deposit Company, Chestnut Street, below Fourth; Fidelity Mutual Life Association, Broad Street, above Arch; The Real Estate, Title and Trust Company, 523 Chestnut Street; The Fire Association, Walnut Street, above Fourth; Imperial Insurance Company, 411 Walnut Street; Manhattan Life Insurance Company, Fourth and Walnut Streets; Mutual Life Insurance Company, Tenth and Chestnut Streets; Pennsylvania Company for Insurances on Lives and Granting Annuities, 517 Chestnut Street; Philadelphia National Bank, 419-23 Chestnut Street; People's Bank, 435 Chestnut Street. The Witherspoon Building of the Presbyterian Board of Publication, Walnut Street, below Broad, and the Girard Estate Building, nearly completed, upon Twelfth Street, above Chestnut.

There are also numbers of fine buildings devoted almost entirely to office purposes, among which are the Bullitt Building, on Fourth, below Chestnut Street, and the Betz Building, opposite the City Hall; the Harrison Building,



Copyright Philadelphia Bourse. 93

The Philadelphia Bourse, Fifth and Market Streets.

Fifteenth and Market Streets; S. P. Watkins, Jr., Building, 1031-33 Chestnut Street, and Franklin Building, Twelfth Street, above Walnut. The leading newspapers are generally occupants of elegant buildings, especially the *Record*, *Times*, *Public Ledger*, *German Democrat*, *Inquirer*, and *Evening Telegraph*.

Many great buildings devoted to jobbing and retail trades are seen along Market and Chestnut Streets, and the general effect of this grand display of architecture is to emphasize the fact of Philadelphia's growing magnitude in the world of trade.

Churches and Sunday-schools.

Philadelphia has upwards of 600 CHURCHES, which is a larger number in proportion to the population THAN ANY OTHER CITY in the world; 95 of these are Methodistic, this sect being stronger here than anywhere else.



Christ Church.

There are 232 CHRISTIAN ENDEAVOR SOCIETIES in the City of Philadelphia Union, which is the LARGEST in this organization.

616 SUNDAY-SCHOOLS are attended by 178,865 youths, and these are instructed by 16,937 TEACHERS.

Public Schools.

Philadelphia has invested in Public Schools more than \$10,000,000. 132,052 pupils are instructed by 3,161 teachers, in 425 schools.

The public instruction of Philadelphia is in charge of a Board of Education, the city being divided into school sections, of which there are 37. School directors are also chosen at local elections by the people. The immediate charge of the work of education is in the hands of a superintendent, the present incumbent being Edward Brooks, LL. D., who has a staff of six assistants. The offices of the Board are upon Filbert Street above Seventh.

Our City Hall.

The New City Hall, usually called the Public Buildings, is the largest municipal edifice in the world. It is still incomplete, about \$20,000,000 having been thus far expended upon it. The length of the north and south fronts is 470 feet, and of the east and west front is 486½ feet. The GREAT TOWER rises to a height of 547 feet 3½ inches, and is the most LOFTY STRUCTURE IN THE WORLD, except the Washington Monument, which exceeds it in altitude less than three feet only. The bronze figure of WILLIAM PENN, which stands on the top of this tower, is 37 feet high. The height to the top of the hat from the ground is nearly double that of the dome of the National Capitol, 67 feet greater than that of the great Pyramid, and 99 feet above that of St. Peters Church, Rome. The total number of rooms is 520. The structure is built of white marble and is richly embellished, both upon the exterior and interior, with emblematic statuary.

Cemeteries.

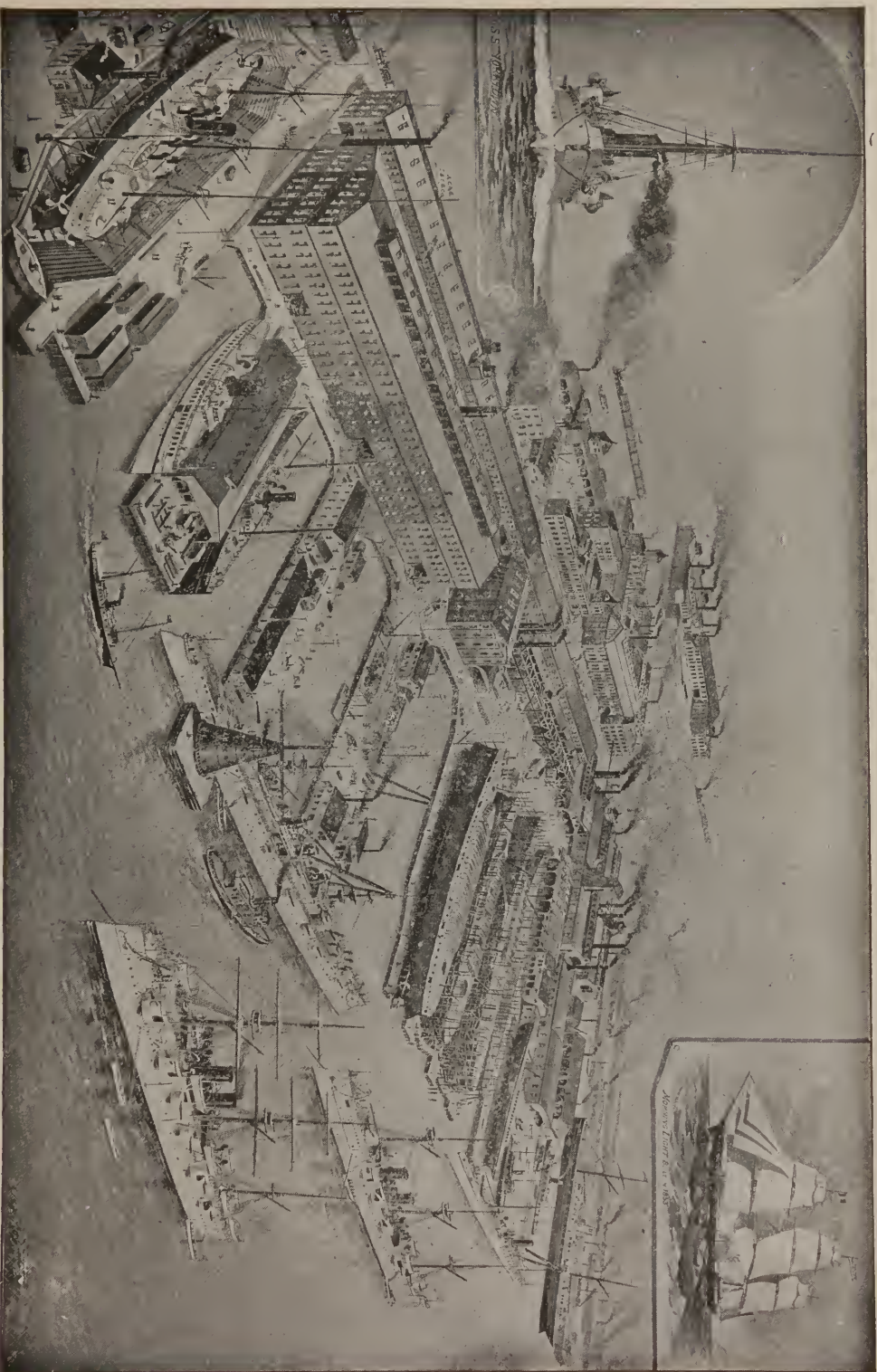
There are 183 cemeteries pertaining to the city, of which number twenty are within the thickly populated parts and are still considerably used.

Many of the modern suburban cemeteries are beautifully located.

Cremation is provided for by a building and furnace constructed for the purpose not far from Chestnut Hill.

Harbor Improvements.

Large sums are being expended annually by both the City of Philadelphia and the general government toward developing the conditions of the lower Delaware River and the Harbor frontage of the city, to meet the requirements of a rapidly increasing shipping trade. The removal of islands and shoals opposite the city, creation of a deep water-way for the largest ships to the sea, the widening of Delaware Avenue and extension of the wharves to deeper water are all features of this line of progress.



Cramp's Ship Yard.

Parks and Squares.

In addition to beautiful Fairmount Park, Philadelphia maintains numerous small parks and squares scattered throughout the city, which are the popular breathing places of the populace. In many of these squares and minor parks full military bands give open air concerts at intervals, during the summer months, both in the afternoons and evenings. Among the best known of these parks are "Bartram's Garden," the first botanical collection of trees and plants upon the Continent; Stenton, the historic home of James Logan, the Secretary of Wm. Penn, and Independence Square.

Fairmount Park contains 2,791 acres. It extends along the Schuylkill upon both banks, and up the valley of Wissahickon creek, about 12 miles. Nearly all of the tract was formerly a series of estates. One portion of it was the residence of John Penn, the last Colonial Governor of Pennsylvania; another, the estate of Judge Peters, the Secretary of War of the Colonies during the Revolution; another, the country seat of Robert Morris, the Financier of the Revolution. The mansion of Judge Peters, as well as others of these colonial dwellings, remain as they were during the Revolution. The chief modern buildings are "Memorial Hall" and "Horticultural Hall." Memorial Hall was built from appropriations made by the State, and for the Centennial Exposition of 1876, at a cost of one and a half million dollars. A gallery of pictures is a leading feature of this building, among them Rothermel's celebrated picture of the Battle of Gettysburg. This building is open to the public free, daily, including Sundays, throughout the year. Horticultural Hall was built at the same time by the city. It contains a magnificent collection of plants, among them the fern trees of Australia. The other nearby structures are the Ohio building and the buildings of the British Commissioners, also remembrances of that Centennial. The buildings of the Zoological Garden, the grounds of which cover a tract of thirty-five acres, are upon the western shore of the Schuylkill River, below Girard Avenue. The boat club houses of the Schuylkill Navy are above the old Fairmount Water Works, along the margin of the river.

These last are equal in all their appointments to those of any organization for similar purposes; in fact no similar collection of buildings as extensive for boating clubs is found anywhere else in the United States. The national rowing course is an exceptional water for its freedom from wind and currents. Three of the city's water works and their reservoirs are also located in Fairmount Park. One of these reservoirs covers a tract of one hundred and five acres.

It is, however, in its natural advantages that the park had its admirable place among the pleasure grounds of the world. The lower Schuylkill section, two thousand two hundred and forty acres, contains half a million trees and shrubs, among these three thousand four hundred forest trees, with some rare specimens eighteen to twenty-seven feet in circumference; it contains three hundred and twenty-one genera and six hundred and fifty varieties of herbaceous and cryptogamous plants. The flowers and flowering shrubs are a remarkable feature in this park.

The fine display of statuary in the Park is largely due to the efforts of

General View of Girard Avenue Bridge, from Zoological Garden, looking East.



the Fairmount Park Art Association. The latest and most valuable addition is the magnificent Washington Monument, erected last spring by the Society of the Cincinnati, at Green Street entrance.

Our Streets.

Three classes of material are now employed in the city proper for paving, namely, Belgian block, where heavy traffic requires it; vitrified brick, and sheet asphaltum. Old pavements are fast disappearing, and Philadelphia is now one of the best paved cities in the world. The introduction of impervious pavements, not only upon the main thoroughfares, but in the courts and alleys, has been a factor in the improvement of the public health, inasmuch as it prevents the accumulation of filth and the pollution of the soil. There are 1,400 miles of streets, of which, 980 miles are paved: With sheet asphalt, 180 miles; with Belgian block, 345 miles; with vitrified brick, 85 miles; macadam, 170 miles; cobble and rubble, 170 miles; other kinds, 30 miles. Number of miles of electric passenger railways, 450. The system of electric passenger railways is most complete, making every part of the city accessible at a moderate fare.

The streets of the city are maintained in a clean condition. They are required to be cleaned, that is the principal ones, once a day, and those streets upon which there is less traffic three times a week. The work is done largely by machinery, supplemented by hand labor. The material collected is transported beyond the city limits. Some of it is used for filling up low lands, etc. Ashes are removed from all dwellings once a week. The garbage is removed daily, and is disposed of in a very satisfactory manner by incineration, and, very largely, by the reduction process by which much valuable material is economized.

The System of Numbering Houses.

One hundred numbers are allotted to each block, commencing at the Delaware River running west, and at Market Street running north and south. Houses on the south and west sides of streets have even numbers; those on the east and north sides of streets have uneven numbers.

The Names of Streets.

The names of streets are displayed on the lamp-posts and on houses at the intersections. Commencing with Delaware Avenue at the Delaware River, the first street west is named Front Street; the second is named Second Street, and so on to the city limits, numerals being used for all streets running east and west, as shown in the following list:

Names of Streets Running East and West with Numbers of Houses.

NORTH OF MARKET STREET.

| HOUSE NO. | NAME OF STREET. | HOUSE NO. | NAME OF STREET. |
|--------------|-----------------|--------------|-----------------|
| 1 | Market. | 1400 | Mastsr. |
| 100 | Arch. | 1500 | Jefferson. |
| 200 | Race. | 1600 | Oxford. |
| 300 | Vine. | 1700 | Columbia Ave. |
| 400 | Callowhill. | 1800 | Montgomery Ave. |
| 438 | Noble. | 1900 | Berks. |
| 500 | Buttonwood. | 2000 | Norris. |
| 520 | Spring Garden. | 2100 | Diamond. |
| 600 | Green. | 2200 | Susquehanna Ave |
| 700 | Fairmount Ave. | 2300 | Dauphin. |
| 800 | Br | 2400 | York. |
| 836 | Parrish. | 2500 | Cumberland. |
| 900 | Poplar. | 2600 | Huntingdon. |
| 1200 | Girard Ave. | 2700 | Lehigh Ave. |
| 1300 | Thompson. | 2800 | Somerset. |

SOUTH OF MARKET STREET.

| HOUSE NO. | NAME OF STREET. | HOUSE NO. | NAME OF STREET. |
|--------------|-----------------|--------------|-----------------|
| 1 | Market. | 1400 | Reed. |
| 100 | Chestnut. | 1500 | Dickinson. |
| 200 | Walnut. | 1600 | Tasker. |
| 300 | Spruce. | 1700 | Morris. |
| 400 | Pine. | 1800 | Moore. |
| 500 | Lombard. | 1900 | Mifflin. |
| 600 | South. | 2000 | McKean. |
| 700 | Bainbridge. | 2100 | Snyder Ave. |
| 740 | Fitzwater. | 2200 | Jackson. |
| 800 | Catharine. | 2300 | Wolf. |
| 900 | Christian. | 2400 | Ritner. |
| 1000 | Carpenter. | 2500 | Porter. |
| 1100 | Washington Ave. | 2600 | Shunk. |
| 1200 | Federal. | 2700 | Oregon Ave. |
| 1300 | Wharton. | 2800 | Johnston. |

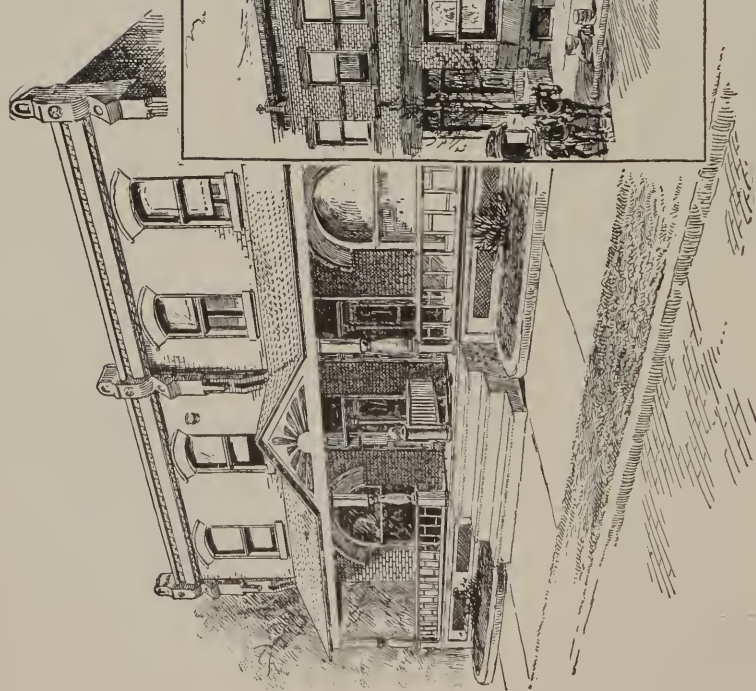
A "City of Homes."

Any industrious and frugal workingman living in Philadelphia may become a house owner if he desires, although to the outsider, who understands few, if any, of our many advantages, this statement will seem far fetched.

Philadelphia was certainly intended by nature for the great, thrifty manufacturing city it is. Controlled by no special influence, unless by its proximity to the anthracite coal fields, there are centered here the largest as well as the most varied assortment of manufacturing industries to be found in any city in the world. That such a variety of shops and foundries, mills and factories should be associated with the idea of a rough and turbulent population is not strange. Indeed, the experience of most cities justifies such conclusions; but here the contrary is the fact, owing to the wide distribution of real estate holdings among the working people; the influence from this condition of things being as distinctly marked among them as among the rich or higher classes anywhere.

With an area of one hundred and twenty-nine and a fourth square miles, or about three thousand six hundred and ten square feet of land to each inhabitant, it affords each person a liberty of movement as well as a standard of hygienic advantages obtainable in few large cities.

In the matter of homes Philadelphia leads all cities in the land. The home of seven rooms, that may be rented for \$15.00 a month contains every necessary convenience found in mansions costing fortunes. Over 121,000 citizens own land.



Working People's Homes in Philadelphia.

For example: A plot of grass in front and a bit of clay in the rear of his two-story brick house gives play room to the workingman's children; the cemented cellar keeps its contents pure and dry; the cosy bath room insures cleanliness and health; the numerous closets, the stationary stands, sinks, book-cases and wardrobes help furnish the house, and the little range in the kitchen completes the home that even the most lowly Philadelphian may reasonably hope to own.

It would be difficult to anticipate a combination of circumstances that could force the people to accept the tenement house method of other cities. While many of these dwellings are in the hands of capitalists as investments, they have also been largely purchased by the wage earners for homes. An important fact pointing to such a conclusion, were better and more conclusive evidence wanting, is the great shrinkage in the deposits in the savings fund institutions.

The opportunities for the wage earners of this city to acquire real estate is over five to one against those of New York, outside of even collateral influences, such as the force of example, the application of rentals as purchase money, instalment mortgages, building and loan associations, life insurance as security for purchase money, and hundreds of other schemes, good and bad, aiming to make every man and woman a real estate owner.

The two-story dwellings of this city are, beyond all question, the best, as a system, not only owing to the single family idea they represent, but because their cost is within the reach of all who desire to own their own homes. They have done more to elevate and to make a better home life than any other known influence. They typify a higher civilization, as well as a truer idea of American home life, and are better, purer, sweeter than any tenement house system that ever existed. They are what make Philadelphia a City of homes, and command the attention of visitors from every quarter of the globe.

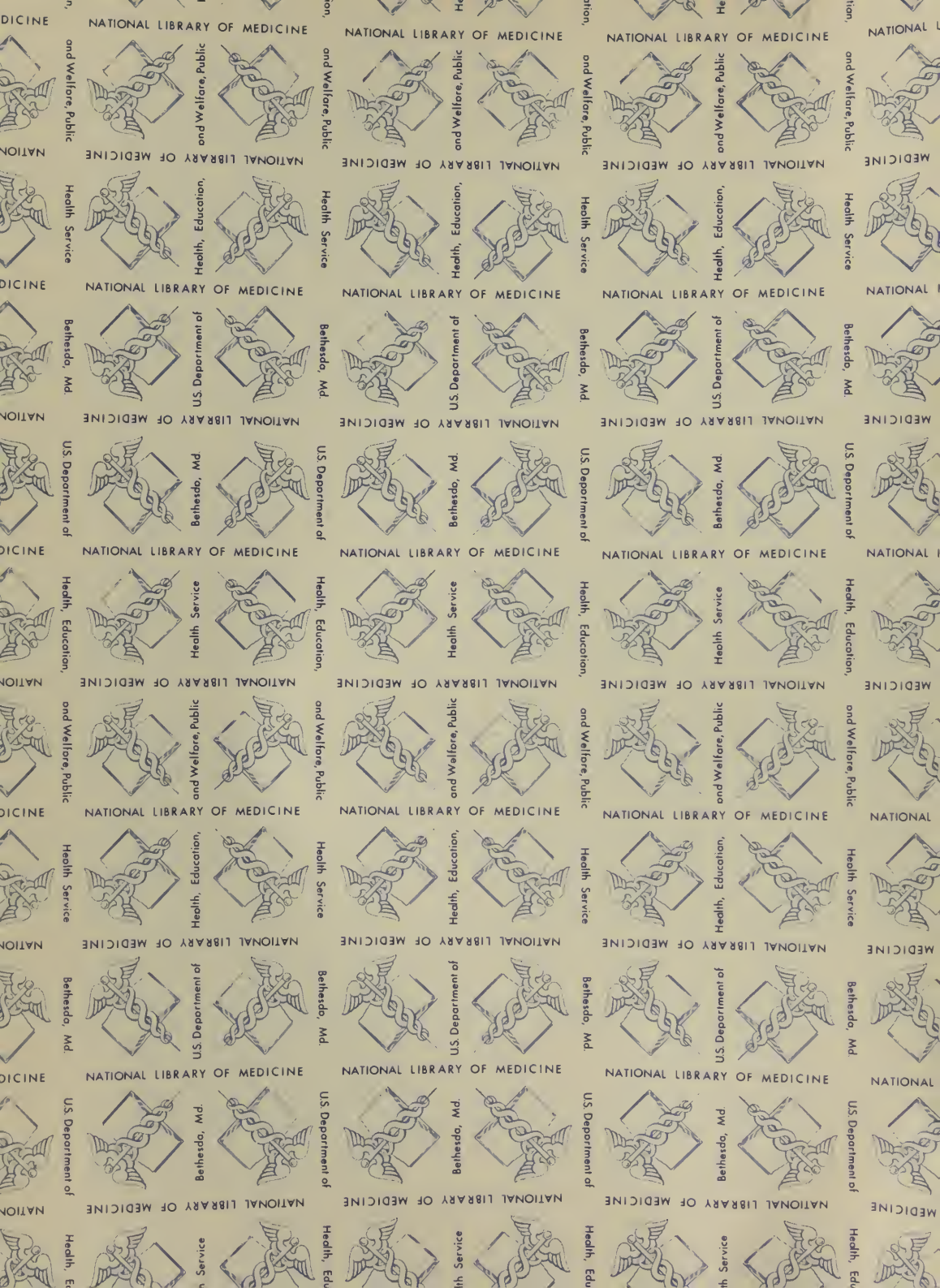
Nearby Resorts.

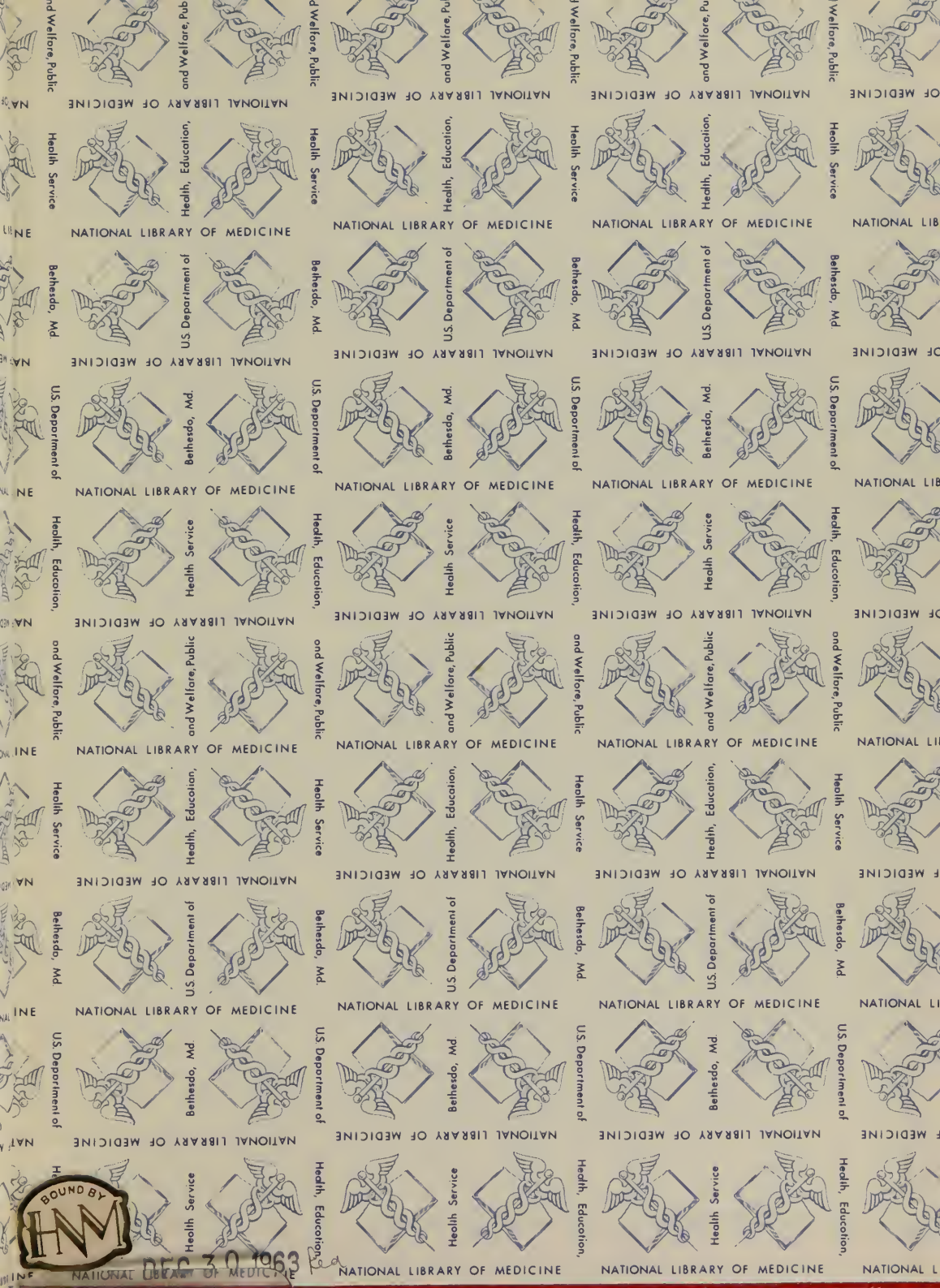
Philadelphia is most happily located with reference to numerous summer and health resorts. The many attractive seashore settlements along the New Jersey coast are within a brief ride by rail. Atlantic City being but one hour removed upon fast express trains. The salubrious uplands are but little more distant, as for instance the beautiful Wernersville resorts upon the hills overlooking the fertile Lebanon Valley are reached in two and a half hours, and many picturesque places upon the upper Delaware river with equal facility.

Many excursion steamers carry large crowds in summer to pleasant spots up and down the river. While the trolley lines maintain splendid "parks" including a great variety of amusements and spectacular features which are always within the reach of the masses and contribute greatly to the general happiness and health of the whole people.



Muhr Memorial House—Sanatorium. The Lunch Hour.





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